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TRENDS IN NEBRASKA'S PERSONAL INCOME AND ITS COMPONENTS

Nebraska's personal income is one indicator of the state's economic performance. The examination of personal income data for the sixteen year period between 1970 and 1985 shows that Nebraska's 1984 and 1985 per capita personal incomes were higher than any of the previous years.

Before showing this record, a brief description of the personal income series will be presented with a short discussion about adjustment of the personal income series for price changes that occurred during the period. This is followed by a discussion of the record of per capita personal income for the past sixteen years. The wage and salary component of personal income for various industries then will be examined.

State per capita personal income estimates are produced by the U.S. Bureau of Economic Analysis (BEA). The latest data were released by BEA in August 1986 for 1985 and prior years. Table 1, which was derived from official BEA estimates, will be used to discuss trends in Nebraska's personal income.

All entries in Table 1 are on a per capita basis and have been adjusted for price change using the Personal Consumption Expenditure Deflator. Column 1 and Figure 1 on page 3 show personal income for the state. Column 1 shows that state personal income was higher in 1985 than any of the previous years. Similarly, the state's 1984 value was higher than any of the prior years. Examination of personal income for the 1970s shows that 1979 was the peak year for the decade, while 1973 was noteworthy when compared to other years in the first half of that decade. The peaks in these two years are due in part to unique circumstances. The 1979 peak can be attributed in part to the considerable amount of construction activity that took place in the late 1970s, including Burlington Northern's double tracking, Alliance car repair shops, Union Pacific's construction in North Platte, and the power plants at Sutherland. It is unlikely that we will see this magnitude of construction activity in the near future, and we certainly cannot expect such projects to occur every year. But

TABLE 1
Nebraska Per Capita Personal Income: 1970-1985
Adjusted by the Personal Consumption Expenditure Deflator to 1985 Dollars

	Per Capita Personal Income (6)+(7)+(8)	Per Capita Net Earnings by Place of Residence	Per Capita Dividends, Interest, and Rent	Per Capita Transfer Payments	Per Capita Farm Proprietors' Income	Per Capita Net Earnings Less Farm Proprietors' Income (6)-(9)	Per Capita Personal Income Less Transfer Payments (1)-(8)
	(1)	(6)	(7)	(8)	(9)	(10)	(11)
1970	$9,428	$7,105	$1,404	$ 918	$ 800	$6,305	$8,509
1971	9,792	7,404	1,398	990	988	6,417	8,803
1972	10,374	7,864	1,469	1,043	1,108	6,756	9,331
1973	11,493	8,755	1,568	1,167	1,699	7,056	10,326
1974	10,825	7,966	1,638	1,218	860	7,106	9,607
1975	11,289	8,298	1,620	1,373	1,178	7,120	9,916
1976	11,204	8,170	1,650	1,383	536	7,634	9,821
1977	11,503	8,351	1,753	1,402	469	7,883	10,101
1978	12,286	8,990	1,856	1,439	838	8,152	10,847
1979	12,545	9,135	1,948	1,465	826	8,309	11,080
1980	11,900	8,260	2,092	1,548	197	8,062	10,353
1981	12,546	8,542	2,390	1,612	782	7,760	10,933
1982	12,271	8,075	2,516	1,676	523	7,551	10,595
1983	12,117	7,849	2,533	1,736	322	7,527	10,380
1984	12,848	8,566	2,562	1,717	793	7,773	11,131
1985	13,281	8,916	2,569	1,792	1,033	7,883	11,489

Source: Bureau of Business Research calculations based on BEA data. This table is condensed from "Nebraska Personal Income, 1970-1985," available upon request from the Bureau of Business Research.

1979 also was a good year due to record manufacturing activity. We will see that 1973 stands out as the year of the Russian grain purchases that helped push Nebraska's farm proprietors' income to the highest level for the sixteen year period examined.

COMPONENTS OF PERSONAL INCOME

Personal income is the sum of net earnings (column 6); dividends, interest, and rent (column 7); and transfer payments (column 8). As a note of explanation, the earnings in column 6 are net of personal contributions for social insurance.

Given the amount of construction activity that took place during the late 1970s, it is not surprising that net earnings (column 6) for 1978 and 1979 were higher than any of the other 16 years examined. Net earnings for 1985 rank third highest. Farm proprietors' income, which is included in column 6, is shown separately in column 9. The peak year for this component was 1973, a year marked by Russian grain imports that far exceeded any other year. The trend in farm proprietors' income appears to be downward over the period examined, with considerable fluctuation from year to year. Farm proprietors' income in 1985 compared favorably with the earlier years. The reader is cautioned that farm income figures are on a per capita basis and not a per farm basis. Farm proprietors' income per farm is shown in Table 2. Per capita farm income data are presented in Table 1, so that we can derive net earnings (excluding farm proprietors' income which is shown in column 10). The trend in net earnings (excluding farm proprietors' income) is upward; however, it is not smooth. For the sixteen year period examined, the second half is clearly above the first half. The peak occurred in 1979. The latest recession is shown in 1982 and 1983 figures, followed by a recovery. Net earnings (excluding farm proprietors' income) in 1985 had not recovered to the levels of the 1978-1980 period before the recession.

Table 2
Nebraska Wage and Salary Disbursements Per Wage and Salary Employee 1970-1985*
(Adjusted for Price Change)

	1970	1973	1976	1979	1982	1983	1984	1985	Percent Change 1970-1972 to 1983-1985
All Industries	$14,676	$15,506	$15,663	$15,864	$15,778	$15,718	$15,733	$15,654	5.4%
Nonfarm	14,745	15,602	15,856	16,008	15,943	15,891	15,892	15,820	5.8
Private	14,785	15,514	15,886	16,094	15,898	15,794	15,742	15,591	4.5
Ag. Serv., Forestry, Fisheries, Other	11,401	10,908	11,017	9,977	9,828	10,668	10,419	10,283	-7.0
Mining	17,906	19,452	19,719	21,263	19,812	19,121	20,298	20,500	8.8
Construction	21,094	22,186	22,141	20,845	19,469	18,109	18,023	18,383	-15.2
General Building Contractors	19,605	19,417	19,932	18,984	18,849	17,749	18,125	18,842	-7.4
Heavy Construction Contractors	22,771	24,717	25,269	25,636	22,899	20,511	20,112	19,506	-12.0
Manufacturing	18,240	18,938	20,023	20,028	20,169	20,207	19,970	20,114	8.1
Nondurable Goods	18,453	19,146	20,090	19,877	19,807	19,620	18,871	19,188	2.6
Food & Kindred Products	19,371	20,029	21,648	21,305	21,187	20,400	18,772	19,159	-0.8
Durable Goods	18,037	18,756	19,959	20,161	20,544	20,814	21,062	21,086	13.7
Transportation & Public Utilities	21,068	23,853	24,659	25,681	26,672	27,316	27,258	27,169	23.6
Railroad Transportation	24,904	29,012	29,043	30,658	34,224	37,021	37,343	35,609	40.0
Trucking & Warehousing	19,012	22,390	22,508	22,771	21,414	20,944	20,519	19,911	1.0
Communications	18,696	21,217	22,780	23,557	24,842	25,542	24,796	26,916	31.0
Electric, Gas, & Sanitary Services	21,838	22,959	25,299	25,574	27,311	27,874	29,672	31,605	32.8
Wholesale Trade	20,029	21,339	20,640	20,443	19,526	19,259	19,131	18,759	-6.5
Retail Trade	10,325	10,656	10,358	10,253	9,592	9,374	9,269	9,006	-12.0
Finance, Insurance, & Real Estate	17,301	17,647	17,523	17,715	18,288	18,700	18,753	19,015	7.5
Banking & Credit Agencies	17,209	17,371	17,105	17,045	17,679	17,836	17,877	17,851	3.3
Other Finance, Insurance, & Real Estate	17,355	17,803	17,768	18,101	18,644	19,210	19,263	19,667	9.9
Insurance Carriers	18,026	18,068	18,357	18,533	19,146	19,456	19,778	20,044	10.2
Insurance Agents, Brokers, & Services	17,557	18,226	18,055	18,553	17,709	16,991	17,307	17,504	-2.9
Services	10,092	10,607	11,117	11,857	12,293	12,383	12,413	12,393	20.8
Business Services	12,132	12,161	11,599	11,363	12,154	12,603	12,649	12,705	4.9
Health Services	11,408	11,698	12,704	13,712	15,179	15,401	15,373	15,142	34.5
Government & Government Enterprises	14,625	15,888	15,759	15,707	16,098	16,222	16,425	16,639	10.1
Federal, Civilian	22,534	24,685	24,663	24,559	23,376	23,928	23,622	23,643	2.0
Military	11,957	14,508	15,231	14,968	17,993	17,799	17,696	18,218	45.1
State & Local	13,866	14,638	14,494	14,538	14,743	14,841	15,148	15,339	7.3
Farm Proprietors' Income Per Farm	16,300	37,101	12,402	19,882	13,211	8,296	21,203	28,116	-5.0

*Underlying data are from the *Regional Economic Information System*, Bureau of Economic Analysis, Table SA7. Converted to a per wage and salary worker basis and adjusted for price change using the Personal Consumption Expenditure Deflator by the Bureau of Business Research. Due to space limitations, all years are not shown. The complete table is available upon request from the Bureau of Business Research.

The trend in the combined dividends, interest, and rent component (column 7) was clearly upward for the period. There were only two years in which a decline in this series was recorded (1971 and 1975). The peak in interest rates came in 1981, which is reflected by the sharp jump in the component. It should be noted that even as interest rates registered declines during the following years, the combined component continued to show small increases.

With one exception, transfer payments (column 8) increased each year between 1970 and 1985. The exception was 1984, which showed a small decline from 1983. There has been interest in examining the trend in personal income with transfer payments removed, presumably to exclude the impact of aid payments. Personal income with transfer payments removed is shown in column 11. The reader is cautioned that transfer payments include many forms of income beside aid payments. Transfer payments include, but are not limited to, payments under the following programs: federal Old Age, Survivors, and Disability Insurance; supplementary medical insurance; state unemployment insurance; railroad retirement and unemployment insurance; government retirement; workmen's compensation; veterans' benefits; food stamps; supplemental security income; and direct relief.

The trend in Nebraska personal income (excluding transfer

(continued on page 6)

Figure 1
Nebraska Per Capita Personal Income

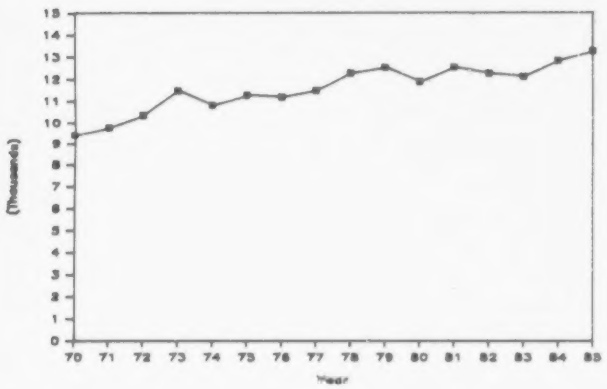


Figure 2
All Industries Wage & Salary Payments Per Employee

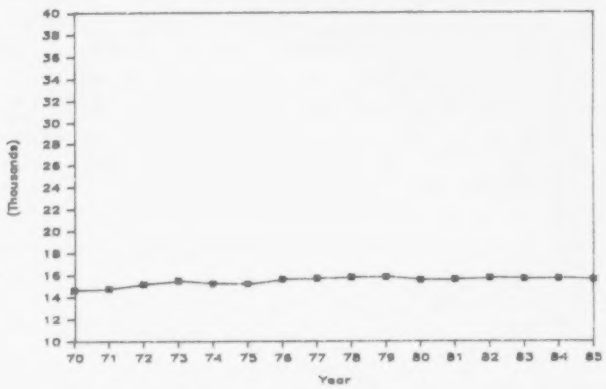


Figure 3
Railroad Wage and Salary Payments Per Employee

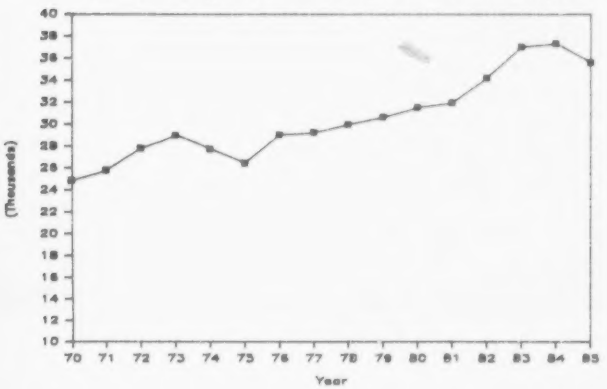


Figure 4
Communications Wage & Salary Payments Per Employee

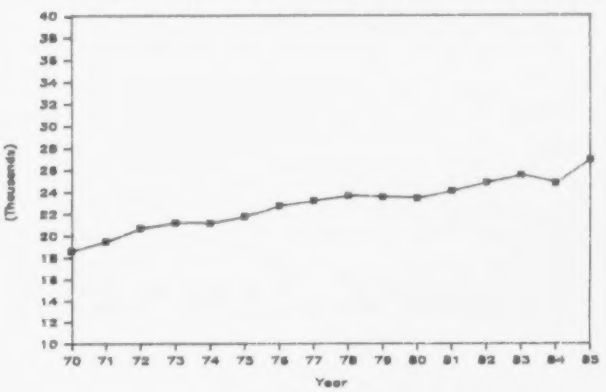


Figure 5
Construction Wage and Salary Payments Per Employee

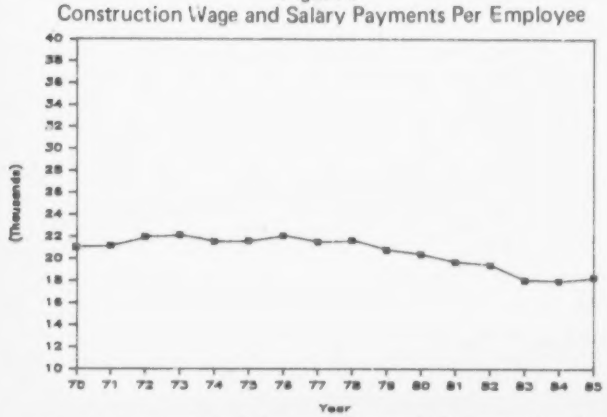
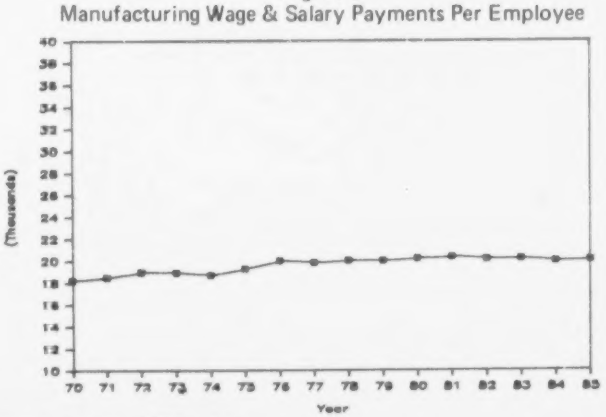


Figure 6
Manufacturing Wage & Salary Payments Per Employee



All data adjusted by the Personal Consumption Expenditure Deflator, 1982=100

Review and Outlook

Nebraska's economy declined in July on a month-to-month basis according to the Bureau of Business Research's physical volume index. The index fell 1.8 percent in July compared to June. The reason for the decline was a 12.5 percent drop in the agricultural sector. The composite of the four nonagricultural sectors, on the other hand, grew 0.4 percent, with construction and manufacturing recording decreases and the distributive and government sectors growing.

The construction sector's drop of 1.4 percent was the second consecutive monthly decline. The growth in construction during the first five months of 1986 appears to have tapered, but July's index is still slightly above the previous year's level.

Manufacturing recorded a fall of 2.4 percent in its index. Although this drop follows three months of growth, manufacturing output and employment have changed little in the last year.

The distributive sector grew 0.8 percent in July. This sector has been the state's most consistent, recording gains in all but one of the previous thirteen months.

Government output was up 3.2 percent in July, following a sizable 5.5 percent drop in June. During the past twelve months this sector has remained fairly flat with month-to-month gains or losses typically less than 1 percent.

Nebraska net taxable sales in July totaled $831 million, up from $755 million in July 1985. When adjusted for changes in

(continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

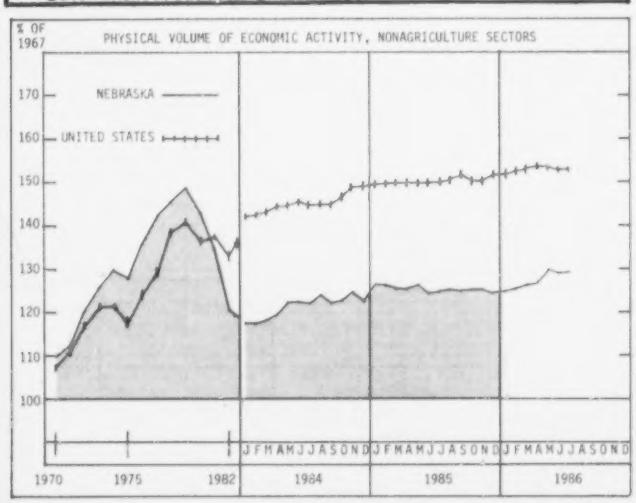
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

July 1986	Current Month as Percent of Same Month Previous Year		1986 to Date as percent of 1985 to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	101.2	103.6	101.9	104.2
Agricultural	77.8	86.6	91.0	92.4
Nonagricultural	105.1	104.0	103.7	104.4
Construction	104.1	106.1	99.1	106.6
Manufacturing	99.1	96.0	96.4	96.6
Distributive	106.2	106.0	104.6	106.5
Government	105.4	106.4	106.7	106.4
Physical Volume	98.3	102.2	100.4	102.5
Agricultural	77.5	87.8	96.4	99.5
Nonagricultural	103.1	102.6	101.2	102.6
Construction	101.0	102.9	96.3	103.7
Manufacturing	101.5	99.0	98.1	98.5
Distributive	104.6	104.4	102.2	104.2
Government	100.7	101.6	103.0	102.7

2. CHANGE FROM 1967

July 1986	Percent of 1967 Average	
Indicator	Nebraska	U.S.
Dollar Volume	379.6	469.1
Agricultural	319.6	284.1
Nonagricultural	388.5	475.1
Construction	304.4	501.6
Manufacturing	364.1	306.2
Distributive	400.6	564.3
Government	423.5	485.5
Physical Volume	131.2	153.1
Agricultural	147.3	127.4
Nonagricultural	128.7	153.9
Construction	82.5	135.9
Manufacturing	150.7	123.7
Distributive	122.1	172.0
Government	152.0	155.5

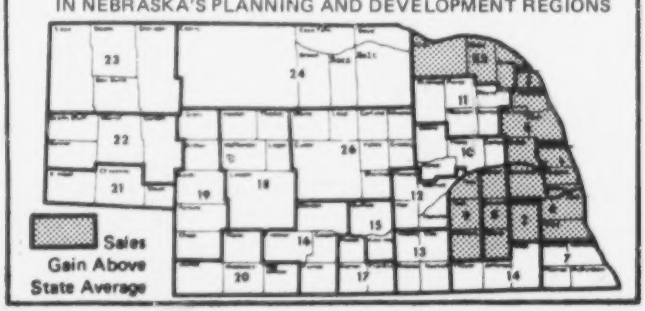


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

July 1986 Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	July 1986 as percent of July 1985	July 1986 as percent of July 1985	1986 to Date as percent of 1985 to Date
The State	109.8	110.1	105.8
1 Omaha	110.7	111.1	108.7
Bellevue	105.3		
Blair	106.3		
2 Lincoln	111.0	109.8	107.4
3 So. Sioux City	124.6	116.8	108.5
4 Nebraska City	101.2	111.4	107.4
6 Fremont	107.9	113.0	107.9
West Point	110.6		
7 Falls City	104.0	110.8	105.8
8 Seward	127.5	110.5	110.7
9 York	107.9	112.1	108.3
10 Columbus	103.2	109.4	105.4
11 Norfolk	114.7	115.3	105.3
Wayne	109.1		
12 Grand Island	105.1	106.4	102.2
13 Hastings	97.0	101.3	103.8
14 Beatrice	108.1	107.1	106.2
Fairbury	112.0		
15 Kearney	110.9	112.7	105.5
16 Lexington	105.8	106.3	99.1
17 Holdrege	106.3	106.1	99.9
18 North Platte	110.7	108.4	104.2
19 Ogallala	110.2	100.3	96.1
20 McCook	106.7	102.3	101.9
21 Sidney	99.2	94.6	93.1
Kimball	87.7		
22 Scottsbluff/Gering	108.7	108.5	102.1
23 Alliance	102.9	115.8	100.9
Chadron	152.6		
24 O'Neill	114.2	114.3	104.0
25 Hartington	104.8	124.5	110.7
26 Broken Bow	104.7	111.1	102.9

[1] See region map below.
[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.
Compiled from data provided by Nebraska Department of Revenue.

1986 YEAR TO DATE AS PERCENT OF 1985 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(continued from page 4)

prices, total sales were up 12.0 percent. Nonmotor vehicle sales were $720 million, compared to $656 million one year ago. Motor vehicle sales amounted to $111 million in July 1986 and $99 million in July 1985. The price adjusted July-to-July changes were an increase of 14.4 percent for motor vehicle sales and an 11.6 percent increase for nonmotor vehicle sales. Nearly all regions of the state shared in July's sales growth, but the highest rates were concentrated in the eastern third of the state.

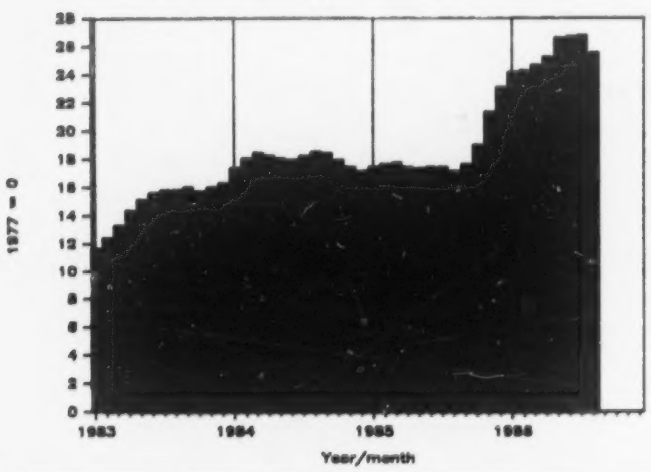
All but one of the city business indexes were above the previous July's level. Chadron led with a 22.9 percent increase. South Sioux City ranked second with a 17.3 percent gain and was followed by Seward (+13.7 percent) and Sidney (+10.4 percent).

The Nebraska composite index of leading economic indicators dropped 1.0 percent during August 1986, the first decrease since August 1985. (The August index contains preliminary data and may be revised upward next month.) August's decrease indicates that the state's economy may be leveling off, especially since the two previous months each recorded gains of only 0.1 percent. A single monthly decline in the leading index should be interpreted cautiously, however, because the decision rule for the signaling of the onset of a downturn is three consecutive monthly declines.

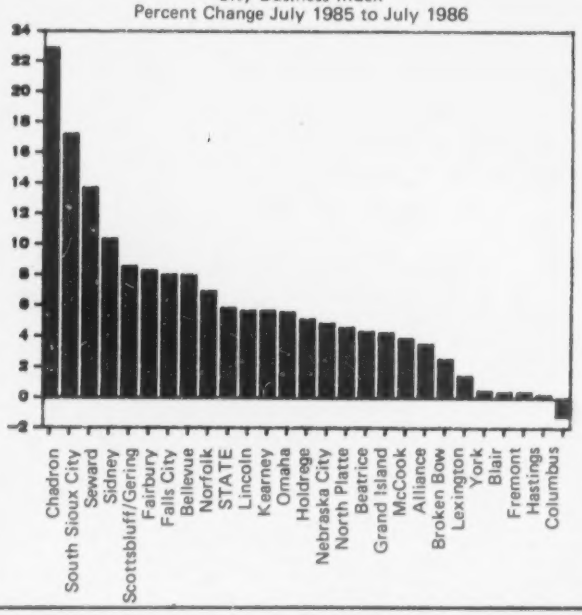
Led by declines in the residential construction component, three of the five components of the leading index fell in August. Other declines were recorded in the initial claims for unemployment insurance and the prices received for farm products components. The growing components were average weekly earnings in manufacturing and the index of 500 common stocks.

JEROME A. DEICHERT

Nebraska Composite Leading Index



City Business Index
Percent Change July 1985 to July 1986



4. July 1986 — CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago: Employment[1]	Building Activity[2]	Power Consumption[3]
The State	100.9	106.9	104.3
Alliance	98.2	165.0	81.3
Beatrice	101.0	90.6	105.0
Bellevue	99.6	289.1	123.5*
Blair	99.6	54.3	100.7*
Broken Bow	101.7	81.1	96.9
Chadron	102.4	57.8	104.2
Columbus	100.7	46.4	106.5
Fairbury	102.0	130.9	99.7
Falls City	102.1	263.3	108.9
Fremont	102.6	35.2	104.5*
Grand Island	102.6	103.2	94.3
Hastings	101.3	106.0	102.9
Holdrege	101.2	125.5	119.2
Kearney	101.8	84.9	98.7
Lexington	100.6	64.2	94.0
Lincoln	100.5	96.3	104.3
McCook	101.8	87.0	116.9
Nebraska City	101.6	184.9	111.5
Norfolk	101.9	77.7	100.8
North Platte	100.4	78.9	101.6
Omaha	99.6	103.9	106.3
Scottsbluff/Gering	101.8	193.3	121.1
Seward	100.9	104.8	97.2
Sidney	101.0	731.8	95.0
So. Sioux City	101.2	273.8	103.0
York	101.4	40.1	89.5

[1] As a proxy for city employment, total employment for the county in which a city is located is used.
[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.
[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

July 1986	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	328.0	101.6	102.3
Commodity component	281.9	98.4	99.5
Wholesale Prices	297.7	96.3	97.4
Agricultural Prices			
United States	223.0	98.7	92.8
Nebraska	217.0	100.5	93.9

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(continued from page 3)
payments) has been upward. The value for 1985 was higher than any other previous year.

WAGE AND SALARY INCOME BY INDUSTRY

The previous section examined Nebraska personal income and its components on a per capita basis. Table 2 shows, by selected industries, the wage and salary disbursement component of personal income on a per wage and salary worker basis. This allows a comparison of the levels and trends in this component among industries. For comparison, the last row of the table shows farm proprietors' income per farm. Before discussing the results, a note of caution is in order. The nonfarm industry entries in Table 2 were calculated for each industry by dividing total wage and salary disbursements in the industry by the number of wage and salary employees (full- and part-time) in the industry. Other things equal, an industry with a large share of part-time workers will have a lower per worker wage and salary disbursement value than an industry with a small portion of part-time workers. Similarly, a change in the mix of full-time and part-time employment within an industry will affect the value from one year to the next.

There are several significant features in Table 2. The overall trend in wage and salary disbursements per wage and salary worker between 1970 and 1985 is upward. (See Figure 2.) The last column of Table 2 shows the 1983-1985 average divided by the 1970-1972 average. For all industries, the increase between the two periods was 5.4 percent. The percentage change column also shows that for most of the selected industries the change over the period was upward.

Figure 2 shows that the largest increases in wage and salary disbursements per employee occurred in the 1970s. The period from 1978-1980 marks a plateau that continues through 1985. For the all industry category, the increase between 1970-1972 and 1978-1980 was 5.9 percent. Between 1978-1980 and 1983-1985, there was no increase.

The results in Table 2 suggest several sectors that should be examined more closely. Railroad transportation stands out not only because of the 40 percent increase in real wages and salaries per wage and salary employee, but also because of the high level when compared to other sectors. This can be seen by examining Table 2, but is more apparent when comparing Figure 3 which shows railroad wage and salaries per wage and salary employee with the figures for several other industries.

The communications sector also realized substantial increases during the 1970-1985 period, as shown in Figure 4. The average 1983-1985 was 31 percent higher than the 1970-1972 average.

Of the industries presented in Table 2, the sharpest declines were registered in the construction and retailing sectors at minus 12 percent. Examination of the record for construction (Figure 5) indicates that most of the decline in this sector occurred between 1979 and 1983.

Manufacturing showed small increases from 1970 to 1976, with virtually no change from that time on. This occurred despite substantial swings in employment in this sector during the period. Between 1979 and 1982, there was a sharp drop in Nebraska manufacturing employment, yet the wage and salary earnings per wage and salary employee showed little response to this pressure. (See Figure 6.)

SUMMARY

1. Nebraska's per capita personal income was higher in 1985 than in any prior year and higher in 1984 than in any prior year.

2. The trend in the net earnings (excluding farm proprietors' income) component of personal income is upward; however, it is not smooth. The peak occurred in 1979, and in 1985 it had not recovered to the levels of the 1978-1980 period before the recession.

3. The trends in the combined dividends, interest, and rent component and the transfer payments component were clearly upward during the sixteen year period. The same is true for Nebraska personal income, excluding transfer payments.

4. The overall trend in wage and salary disbursements per wage and salary worker is upward between 1970 and 1985, but the 1978-1980 period marks a plateau that continues through 1985.

5. Railroad transportation and communications stand out as sectors that realized large increases in wage and salary payments per wage and salary employee when compared with other industries. Manufacturing realized a small increase between 1970 and 1985, while wage and salary payments per wage and salary employee declined in construction.

DOUGLAS O. LOVE and TERRY OSWALD

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BUILDING PROSPERITY
Nebraska Economic Development Strategy

Nebraska Economic Development Strategy, Building Prosperity, the preliminary report of the Nebraska Department of Economic Development which is excerpted in part below, is undergoing a period of review and revision in preparation for submission to the legislature. The next step in the planning process, which began in June, is a series of meetings open to the public scheduled for December 5 in Lincoln at the Cornhusker Hotel. The Blue Ribbon Panel, a special advisory group to the Department of Economic Development, will meet at 9:00; other agencies and organizations designated in the strategies will meet at 1:30; the general public and nondesignated organizations will meet at 2:30.

The *Nebraska Economic Development Strategy* will be a formal contract for directing the economic future of the state. The advantage of the contract is the value added from concentrating resources on agreed upon outcomes. To be successful, the plan must have enough structure and continuity to direct activity toward the solutions long enough to produce results, but be flexible enough to allow evolution as conditions alter and new knowledge is acquired. Nebraskans must embrace and invest in change to successfully take control of their future.

Part of Nebraska's proposed economic development plan is reprinted in this issue. The report was prepared by the Department of Economic Development, from whom copies are available. This report provides a critical examination of Nebraska's economic development potential. But it provides more than just an analysis of Nebraska's strengths and weaknesses; it suggests actions that may encourage the process of economic development.

Equally important is the climate this plan establishes toward change. If Nebraska is to be successful in its quest for economic development, it will have to make the necessary investment in roads, education, health care delivery systems, and in promoting the state internally and externally. *(See page 5.)*

One of the most important items that must be addressed is Nebraska's self image. Unless Nebraskans have a feeling that exciting things are happening in Nebraska, the development effort will be handicapped.

It is important that Nebraskans put the atmosphere of crisis behind and approach change as an opportunity. The governor, the legislature, the Department of Economic Development, elected and appointed local officials, and other interested citizens must develop and promote a positive view about the opportunities for doing business in Nebraska. From these activities a partnership must be fused between the public and private sectors. An examination of this proposed plan indicates there are three main actors in promoting Nebraska and its economic development: private businesses, state and local government, and the University. Successful states and communities have blended these three elements into partners that support each other's activities. An indication of the type of partnership required is the proposed clearinghouse for securing information on how to do business in Nebraska. No longer will a firm need to go to five different state agencies to secure permission to expand.

Change offers opportunities. Without change we would still be riding horses and using outhouses. The fear of change must be overcome and replaced with a sense of optimism and enhancement of opportunities. This plan offers a first step. Growing competitive pressure in an international marketplace is forcing rural communities across the nation to change. Those who can adapt and capitalize on new opportunities will survive. Those that fail to adapt or are unwilling to adapt will be run over.

DONALD E. PURSELL

NEBRASKA'S ATTRACTIVENESS TO INDUSTRY

Economic Geography Factors

Assuming a selection process whereby firms consciously compare and contrast the characteristics that determine the ability to make a profit in various locations, it is important to assess how the state compares to others in order to understand its capacity to compete for business activity. Although this process varies according to the age and type of firm, a general assessment of Nebraska's standing is useful for revealing strengths that can be exploited and weaknesses that can be mitigated.

The assessment of Nebraska's standing focuses on the traditional economic geography factors of labor, transportation, and energy; the traditional business climate factors of taxes, tax incentives, financial incentives, special services, and other laws that are most important to economic growth occurring from outside; and small and new business factors that are most relevant for growth that occurs from within.

The comparison group is somewhat arbitrarily chosen in a general comparison because the selection of states is not driven by the firm's needs. The states selected for this exercise include Nebraska, Iowa, Kansas, Missouri, Oklahoma, and Colorado. The comparison group selected from the same geographic region offers one reasonable point of comparison.

Labor. The quality of Nebraska's labor force compares very favorably to other states in the regional comparison group. When making comparisons to the above states for a selected recent year, Nebraska exceeded the average for value added, was below the average wage for manufacturing production worker, had below average work stoppages, below average unemployment tax rates, above average worker compensation rate, above average high school graduation rate, and above average scores on ACT tests.

Value added per dollar of production worker payroll for all manufacturing groups in Nebraska was $4.38 in 1982, compared to an average of $4.29 for the comparison states. Average hourly earnings of production workers on manufacturing payroll in Nebraska was $8.93 in 1984, compared to the comparative group average of $9.28. Nebraska is one of the 19 right to work states in the nation and among three in the comparison group. In 1978 Nebraska experienced 14 work stoppages, compared to an average of 44 for the other five states.

Average unemployment tax contribution rate in Nebraska was 1.9 percent in 1985, compared to 2.85 percent for the comparison group. Average worker compensation rate per $100 of payroll in Nebraska was $1.84 in 1985, compared to $2.09 for the comparison group.

The rate of high school graduation in Nebraska was 86.3 percent in 1985, which was above the average of 78.48 percent for the five states as well as the average for the U.S. Nebraska surpassed the comparison group average ACT examination score of 19.08 in 1985 with a score of 19.1, which was also above the national average.

Transportation. Nebraska's central location combined with the important transportation advantages of a major river, strong rail and truck services, air service comparable to other midwest states and a major cross-country interstate highway that passes through the entire width of the state give Nebraska access to major markets across the United States and overseas.

All of Nebraska's communities are connected by a good system of all weather roads--a system that at present contains more than 96,301 miles of hard-surfaced roads. Included in this system is a 475-mile stretch of Interstate Highway 80, which is the only continuous coast to coast (New York to San Francisco) segment of the system. North-south interstate highways that add to Nebraska's market access are I-29, passing along Nebraska's eastern border and I-25, in close proximity to the state's western border. All of these roads make it possible for nearly all communities to have regular motor carrier service with one-day service to a large number of major cities including Chicago, Denver, Kansas City, Minneapolis, and Oklahoma City. Currently, 113 Class I and 24 Class II motor freight carriers operate in the state.

Nebraska is ranked fourth in the nation as a rail center, with the most direct midcontinent route to the west coast at San Francisco passing through the state. Branches from this route terminate in Portland, Spokane, and Seattle, with another branch routed south from Ogden, Utah terminating in Los Angeles. Nebraska's 11 railroad carriers fell below the average number of 16 carriers for states in the comparison group. Three major railways serve the state with approximately 4,900 miles of track. These included Burlington Northern, Chicago and Northwestern, and Union Pacific/Missouri Pacific.

Distributed throughout Nebraska are 111 airports, including commercial and municipal airports. Nineteen commercial airlines serve the state with direct service available to both coasts. The number of carriers in Nebraska is below the average number of 25 carriers for the comparison group of states. Communities receiving commercial airline service include Alliance, Chadron, Columbus, Grand Island, Hastings, Kearney, Lincoln, McCook, Norfolk, North Platte, Omaha, Scottsbluff, and Sidney.

The Missouri River of Nebraska's eastern border has made the state a western terminal for water transportation by barge for ocean traffic from the Atlantic (via the Great Lakes and St. Lawrence Seaway), the Gulf of Mexico, and world markets. Some 35 towing companies and barge owners serve Missouri River terminals.

Energy. Nebraska's electricity and natural gas rates for industry are among the lowest in the nation. In 1983 average monthly industrial electrical costs were $1,482, compared to an average of $1,953 for the comparison group.

In 1984 average cost of industrial natural gas in Nebraska was $3.65 per mm. BTU, compared to an average of $4.40 for the comparison group.

Business Climate Factors

Taxes. The magnitude of Nebraska's tax burden and the relative capacity to fund state tax revenues via personal income compares favorably to the average for the nation, but unfavorably to states in the comparison group. Per capita state taxes for Nebraska in 1984 were $665, compared to $718 for states in the comparison group. State and local taxes per $1,000 of personal income for Nebraska in 1984 were $110, compared to $115 for the nation and $108 for the comparison group.

When comparing the trend in capacity to fund state tax revenues via personal income, Nebraska did not compare favorably to either national or comparison group averages. Over the period 1981-1984, the percent change in state and local taxes per $1,000 of personal income in Nebraska was 6.5 percent, compared to 4.7 percent for the nation and 2.2 percent for the comparison group.

When comparing state and local expenditure growth versus revenue growth, Nebraska revenues increased more quickly then expenditures. However, Nebraska's ratio of .966 was above the average for both the nation at .867 and the comparison group at .934.

In 1984 Nebraska's corporate and sales tax rates were above the average and the personal income tax rate was below the average for the comparison group. Nebraska's net effective corporate income tax rate was 6.56 percent, compared to the average of 5.43 percent; the state sales tax rate was 3.5 percent , compared to the average of 3.42 percent; and the net effective personal income tax rate was 3.25 percent, compared to 4.26 percent.

Tax Incentives. Nebraska offered fewer tax incentives for industry than either the average for states in the comparison group or the U.S. in 1985. In a survey of states conducted by *Site Selection Handbook*, Nebraska offered four of 14 tax incentives, compared to 8.2 for the comparison group and 8.1 for the nation.

Nebraska offers tax exemptions on inventory goods in transit, manufacturing inventories, new equipment, and materials used in manufacturing. At the time of the survey Nebraska offered no tax incentives for job creation, new investment, or research and development; however, by January 1, 1987 Nebraska will begin offering tax incentives for job creation and new investment. Kansas and Missouri offer incentives for the first two categories; Iowa has tax exemptions for research and development.

Financial Incentives. Nebraska makes available few financial assistance options when compared to either the average for the eight-state comparison group or the nation. In 1985 Nebraska provided financial assistance in five of the18 financial categories included in the survey, compared to an average of 8.0 for the comparison group and 9.8 for the U.S.

Types of financial assistance available in Nebraska include a state sponsored development authority, a privately sponsored development credit corporation, a state authority of revenue bond financing, city and county revenue bond financing, and state financial aid for existing plant expansion. Nebraska offers no state loan programs for industrial building construction or equipment and machinery. Iowa, Missouri, and Oklahoma offer assistance in both areas.

Special Services. Nebraska provides an above average number of special services for industrial development with 16 programs in 1985, compared to an average of 14.4 for the comparison group and 15.1 for the nation.

Examples of Nebraska services include state programs to promote research and development and exports, employee training and retraining, federal procurement, and technology advice.

Other Laws. Nebraska has legislated five of the standard industrial classification laws in the *Site Selection Handbook* survey that offer additional advantages to industry, compared to an average of 4.2 for the comparison group and 4.0 for the U.S.

The state offers accelerated depreciation of industrial equipment, a right to work law, a state minimum wage law, a fair employment practice code, and a statewide uniform property tax evaluation law.

Small Business Support. A 1985 survey of the 50 states' efforts to improve the climate for small businesses ranked Nebraska 49th. Colorado was ranked third, Kansas 23rd, Iowa 38th, Missouri 41st, and Oklahoma 43rd.

Nebraska's poorest showing was in state programs for small business finance, such as direct loans, loan guarantees, bond guarantees, and venture capital and state programs for small business support, such as an advisory office, and ombudsman, an advisory council, a legislative committee, a statewide conference, and procurement set asides.

In 1985 Nebraska was below the median for bank loans as a percent of assets and commercial/industrial loans per capita, while above the median for small business investment company finance per capita and business units per 1,000 population. The state had the median of the three *INC.* 100 companies over the period 1979-1984.

Community Leadership, Preparedness, and Quality of Life. Economic development takes place in the communities of the state, each having varying levels of leadership, preparedness or capability to seize economic opportunity, and basic services and amenities that establish a quality of life. While recognizing the differences on the basis of these factors, a reliable methodology does not exist for comparing communities within the state, or Nebraska with other states. Rather it is the presence of leadership, preparedness, and quality of life that are important.

Nebraska communities are unique in character and represent an image of the vitality of their populations. Because they vary in size, resources, and talents, each prepares differently to take advantage of economic opportunities that enhance the quality of life.

Central to community preparedness is the leadership that mobilizes and directs resources to strengthen the local economic base. Successfully prepared communities follow a generally accepted approach to assessing strengths and limitations, setting goals and strategies, and implementing action plans. Through this approach, communities become better able to seize economic opportunities when they arise.

Summary

Nebraska's comparative advantages are strongest for factors that affect the location of relocated or branch plants and weakest in the factors that affect the start-up of new firms. Nebraska's above average value added, below average production worker wage rates, below average work stoppages, below average unemployment tax rates, above average high school graduation rate, and above average scores on ACT tests indicate a high quality labor force that represents an important comparative advantage for the state. Furthermore, Nebraska's transportation network, including its number four ranking for rail service, indicates a significant comparative advantage, as do the below average natural gas and electricity rates.

While Nebraska's business climate does not present barriers to development, it does not offer strongly significant advantages that stimulate new business activity. With corporate and sales tax rates above the average, income tax rates below the average, and percent changes in state and local taxes per $1,000 of personal income above average, Nebraska's tax climate represents neither a comparative advantage nor disadvantage.

Furthermore, Nebraska is below the average in the number of tax incentives and financial asistance options extended to businesses. Special service programs that are important to start-up, expanding, and imported enterprises are provided at an above average rate in Nebraska.

Nebraska has not compared well in the area of small business support, although recent program developments

not apparent in the survey represent important progress. Nebraska's below the median showing for bank loans and commercial loans per capita indicates weaknesses in the access to capital.

The evidence strongly supports the conclusion that Nebraska is strongest in economic geography factors that provide comparative advantages most critical for the importation of firms. However, it is important to consider the important, but limited, potential for creating new wealth, given the relatively few branch plant locations made each year.

The evidence suggests that more progress must be made in small and new business support in order that Nebraska may compare more favorably with other states. Given the greater potential for creating wealth through the start-up of new firms, risking public and private investments seems economically justified.

NEBRASKA'S ECONOMIC DEVELOPMENT PLAN OF ACTION

Economic Goals, Objectives, and Strategies

In attempting to define policy to foster economic development in Nebraska, the Department of Economic Development (DED) has set goals, objectives, and strategies. The goals are the outcomes that, provided intervention, will change the present economic situation and create a new and improved future for Nebraskans. Objectives are the measurable targets indicating accomplishment of the development goals, while strategies identify methods to achieve the objectives and direct the activities of those involved in public and private intervention. The list presented here includes highlights of many plans suggested by the Department of Economic Development.

ENCOURAGE STATEWIDE COOPERATION AND SUPPORT FOR THE DEVELOPMENT OF A STRONGER NEBRASKA ECONOMY

DED shall maintain and present to the legislature a long-term, comprehensive economic development plan for Nebraska. DED shall conduct an ongoing planning process that involves a broad cross section of citizens and members of the private sector. The input from these citizens will be used to update the goals, objectives, and strategies of the DED long-term comprehensive plan.

The state of Nebraska shall establish and maintain a solid and expanding leadership core to accomplish economic development. The knowledge and expertise of various institutions, such as the University of Nebraska, agencies of state government, community development organizations, and private sector organizations will be used to support economic development through efforts coordinated with the Department of Economic Development.

DED will coordinate development activities with other public agencies, the University, and private entities. The governor should direct all agencies of the state to incorporate economic development goals and objectives and develop strategies consistent with their missions. The Department of Economic Development recommends that the governor establish a "Nebraska Means Business" roundtable comprised of representatives from government, industry, and education as a mechanism for identifying and removing development barriers, as well as constructing avenues for existing business expansions and to emphasize publicly Nebraska's strengths.

The legislature shall establish and maintain a committee or committee structure on economic development that considers proposals for the funding, creation of incentives, and other actions related to development. The presidents of the University of Nebraska and other institutions of higher education shall design and implement policies and programs that will accomplish economic development objectives consistent with their missions.

The state of Nebraska should establish and maintain strong research institutions for economic development. The availability of accurate, timely data and analysis of relevant information is essential for development.

DED shall coordinate a program of economic development information management for the state. It will identify two industries in which Nebraska will take the national lead in the 1990s and other industries to target for growth. The University of Nebraska shall identify priorities for research that can have the greatest impact on economic development in Nebraska.

DEVELOP AND MAINTAIN A POSITIVE BUSINESS CLIMATE IN NEBRASKA

The state of Nebraska should support, expand, and create programs to increase the availability of capital for economic development projects. Capital is essential in industrial start-ups and expansion. Recent reports indicate a decreasing availability of debt capital in Nebraska. A 1985 survey by *Inc.* magazine of the 50 states ranked Nebraska 46th in efforts to improve the climate for small business. The Governor's Task Force on Small Business Equity Financing emphasized the importance of initiating efforts to make equity capital more readily available to small business projects.

DED shall support existing private and public financing mechanisms and initiate new mechanisms to meet business development needs. DED shall implement a competitive program directed at attracting foreign investment for development projects in Nebraska. The Research and Development Authority shall develop separate funds for the following: applied research and development, seed capital, and a Small Business Innovative Research matching grant program. The State Investment Council shall increase public pension fund investment for business development purposes. The Nebraska Bankers Association shall encourage and support the creation of a for-profit venture capital fund/organization. Municipalities and counties shall establish local venture or seed capital mechanisms to supplement other private and public development financing tools.

The state of Nebraska shall maintain a competitive incentive posture for industries, including taxes, regulations, and other incentives appropriate for industries that contribute to the state' s economic base. Incentives are not the whole reason a business comes to or stays in a state. Incentives often provide the margin necessary to win a business choosing between two states. Regulations that impose constraints on business activity should be watched.

Removing regulatory barriers without compromising the general public welfare can increase Nebraska's competitive position.

DED shall monitor regional differentials with respect to regulations, business incentives, and other economic development climate issues and make appropriate legislative and programmatic recommendations. DED shall establish a one-stop business development clearinghouse for permits, regulations, financing, taxation, and incentives. The legislature shall prepare and update annually a handbook of state laws that have an impact on economic development.

The state of Nebraska shall increase comprehensive business assistance services to both existing and start-up businesses across the state. Recent data show that business establishments are increasing in number in Nebraska at only about 60 percent of the national average. Nebraska ranked 46th nationally in the number of new corporations between 1980 and 1985. Economic diversification occurs primarily through new business start-ups and locations and through expansion of existing small businesses. Providing assistance is essential for economic growth.

DED shall manage and coordinate the existing and expanded business assistance network to avoid duplication and increase its effectiveness. DED shall expand the program encouraging the start-up and expansion of businesses contributing to the state's economic base. The University of Nebraska shall maintain and develop programs to provide training of international marketing, franchising, and productivity to be delivered through a regional business assistance network. The technical community colleges, colleges, and universities in Nebraska will provide a program to transfer technology to business and industry. The technical community colleges and state colleges shall develop programs to provide management and employee training to be delivered through a regional business assistance network. The Nebraska Business Development Center shall manage programs to provide business planning, marketing and financial planning to be delivered through a regional business assistance network.

The state must work to improve its image as a place of economic opportunity. The Department of Economic Development plans to deliver national and international marketing campaigns promoting Nebraska as a place to do business and as a place to live. The Nebraskaland Foundation and the Society of Nebraska Admirals, in conjunction with DED, will prepare and conduct a 1988 Nebraska Homecoming Celebration that focuses on Nebraskans' pride in living and working in the state. The Nebraska Diplomats also will work to develop a program recognizing Nebraska industry.

The state must try to systematically improve its infrastructure to eliminate any negative locational factors. Adequate streets, highways, water supply, wastewater collection and treatment, airports, and telecommunications are vital to economic development.

DED shall continue its efforts to define and make recommendations concerning the telecommunications infrastructure of Nebraska. The department recommends that the governor implement the recommendations of the infrastructure report *Nebraska Can Work*.

NEBRASKA'S ECONOMY SHOULD BE DIVERSIFIED SO THAT CITIZENS CAN PARTICIPATE MORE FULLY IN DYNAMIC GROWTH, ENJOY A WIDER ARRAY OF CHOICES, AND EXPERIENCE GREATER ECONOMIC STABILITY.

The state should strive to increase business activity through the start-up and importation of industries suited to Nebraska's strengths. The Department of Economic Development will monitor and assess the technology of telecommunications and information. The Research and Development Authority will identify other areas of possible commercialization and the implementation of value added industries in Nebraska. A match marketing program that provides information to Nebraska and non-Nebraska businesses on opportunities to buy inputs from other Nebraska businesses and sell outputs within the state will be established. Foreign reverse investment should be fostered. The legislature will be encouraged to increase state funding to establish Nebraska as a viable location for film and television production.

To meet the needs of new industry, current training programs should be specialized and expanded. Retraining programs should be implemented also. The state must identify new ways to more effectively utilize its institutions of education for long-term economic development and diversification. The University of Nebraska Extension Service should be broadened to assist with outreach to business, industries, and communities as well as agriculture. Faculty and staff members at UN-L and other colleges and universities should be encouraged to use their skills in encouraging business creation or expansion.

NEBRASKA'S CURRENT ECONOMIC BASE, INSTITUTIONAL STRENGTHS, AND NATURAL AND HUMAN RESOURCES SHOULD BE MAINTAINED AND EXPANDED

Exports of Nebraska products should be promoted. To assist in achieving this goal, the University of Nebraska could develop programs to increase the understanding of Nebraska companies in conducting business internationally.

Regional and community based development also must be promoted. State funding, financial programs, and a statewide municipal bond pooling authority can be established to implement this objective. Nebraska's 540 communities can benefit from efforts to expand their economic base beyond agriculture.

Agriculture must be expanded and diversified and marketability of agricultural outputs must be strengthened. The University of Nebraska Food Processing Center is already working to increase food processing and value added processing of present crops; this work should continue. The Nebraska Technical Assistance Center also will strive to foster the application of agricultural engineering technology to industry. State farmers should be encouraged to expand beyond growing to production and processing.

Current Nebraska industries contain growth potential. These industries must be identified and nurtured. Department of Economic Development should continue present efforts to help state businesses expand and diversify. The continuing need to upgrade the quality of Nebraska education, both K-12 and higher, is primary to this

goal. Expanding industry will enhance employment and business opportunities for Nebraskans, including women, minority group members, the elderly, and the physically impaired.

EVERY NEBRASKA COMMUNITY CAN PROMOTE ECONOMIC DEVELOPMENT

Researchers recently asked 1500 firms what factors were important in determining location. The following items were mentioned as absolutely essential or very important by more than 40 percent of the firms surveyed: clean physical environment, availability of technical personnel, absence of drug and alcohol problems in the community, quality public school systems, low traffic congestion, knowledgeable bankers friendly to technology-based firms, positive policies and attitudes of local government toward industry, medical services and facilities, one day service from United Parcel Service and Federal Express, housing for management, nearby airport for passenger traffic, opportunities for consultation with university people. Most of these items are within the control of Nebraska's communities.

ABOUT THIS ISSUE...

This edition of Business in Nebraska marks the Bureau of Business Research's first foray into the desktop publishing arena. Typsetting, layout, and paste-up were done on a Macintosh Plus personal computer and a Laserwriter printer using PageMaker software. Readers' comments are solicited on the layout and contents.

This new format also illustrates the importance of new blood in an organization. One of the newest staff members--Monty Lambie--played an important role in solving technical questions. Since Monty has no history of working with other systems, he was able to move quickly to adopt new methods.

DONALD. E. PURSELL

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NEBRASKA PERSONAL INCOME & EARNINGS 1970-1985

Personal income often has been used to examine the state's overall economic performance and well-being. For example, in the November 1986 issue of *Business in Nebraska*, the trends in the state's personal income and several of its components were reviewed. The article showed that Nebraska's per capita personal incomes in 1984 and 1985 were higher than in any of the previous years. This current article will review different components and compare Nebraska's trends to those of the nation.

In August 1986, the U.S. Bureau of Economic Analysis released personal income information for 1985 and previous years. Personal income is income before taxes and consists of earnings; dividends, interest, and rent; and transfer payments (such as social security). Earnings also are known as labor and proprietors' income and consist of wages and salaries, other labor income, farm proprietors' income, and nonfarm proprietors' income. It is these components of earnings on which this article will focus.

Table 1 on page 2 presents Nebraska's earnings and income data for selected years between 1970 and 1985. From this table, it can be seen that all sectors grew, with other labor income growing most rapidly (405 percent) and farm proprietors' income growing least rapidly (85 percent). Much of this growth, however, is misleading because it reflects increasing prices and a growing population. To account for these changes, the income and earnings numbers in Table 1 have been divided by population and the U.S. personal consumption expenditure deflator. The result is constant dollar per capita income. Additionally, the PCE deflator was adjusted so that 1985 is now the base year. For the remainder of this article, all income and earnings data will be price-adjusted.

Although it may be somewhat inappropriate to express the components of earnings on a per capita basis because all persons in the state do not receive wages and salaries and/or proprietors' income, it does allow for comparisons that are consistent for all measures. Later in this article, the individual types of earnings will be adjusted by the number of earners in each.

In discussing the overall economic well-being of the state, one of the most common measures is price-adjusted per capita personal income. From Table 1 and Figure 1 (on page 3), it can be seen that per capita income has grown 29.2 percent since 1970, with 1985 higher than any preceding year. Over this same period, U.S. per capita income grew 29.4 percent. Figure 1 shows that there is considerable volatility in this sector, due primarily to fluctuations in farm sector income.

If farm income is removed, per capita nonfarm income exhibits more stability. Nonfarm income was relatively flat in the early 1980s, but since 1982 has grown steadily. The average of 1983-1985 was 35.5 percent higher than the 1970-1972 average, compared to a 31.0 percent increase for the nation.

Although nonfarm income is a good measure of the well-being of the state, it includes transfer payments and dividends, interest, and rent which do not necessarily reflect payments for current production in the state. Per capita nonfarm earnings measure the income of nonfarm laborers and proprietors in the state. Nonfarm earnings exhibited a trend roughly similar to nonfarm income, but they fell much more in the 1980s, reaching a trough in 1983. Since 1983, nonfarm earnings have rebounded, but 1985's value of $8,589 was still below the values in 1978 and 1979. During the period 1970-1972 and 1983-1985, per capita nonfarm earnings rose 22.2 percent, while U.S. per capita nonfarm earnings were up 19.8 percent.

Table 1 and Figure 1 also review the per capita components of earnings. As indicated earlier, caution should be used in interpreting these values.

Another measure of aggregate activity in Nebraska is labor compensation; that is, wages and salaries and other labor income. Both labor compensation and wages and salaries followed the trend of earnings; however, 1985 values were only slightly lower than the 1979 peak and surpassed all other previous years. Between 1970-1972 and 1983-1985, wages and salaries grew 21.0 percent and other labor income grew 104.7 percent. For the U.S., the respective growth rates were 17.0 percent and 86.6 percent.

Per capita nonfarm proprietors' income has remained steady during the 16 year period. There was some growth during the 1970s, with a peak in 1979. Following the 1979 peak were three years of decline, followed by two years of growth. The 1983-1985 average was 2.4 percent above the average in 1970-1972 for Nebraska and was 6.2 percent higher for the nation.

Per capita farm proprietors' income peaked in 1973, with 1975 another year of relatively high incomes. Since 1975, the

trend in per capita farm proprietors' income has been fairly flat, with considerable year to year fluctuations. Despite the fact that the value for 1985 was higher than any year since 1975, the average for 1983-1985 was 25.8 percent less than the average for 1970-1972. Nationally, the comparable value was down 45.3 percent.

Figure 2 on page 3 presents measures for the U.S. similar to those of Nebraska in Figure 1. Comparing the two, it can be seen that two major differences exist. First, per capita total personal income in Nebraska is more volatile than for the U.S. Second, the downturn in the beginning 1980s affected Nebraska more severely (in all measures) than the U.S. and Nebraska has been slower to recover. All measures for the U.S. exceed their comparable 1979 values.

The Bureau of Economic Analysis also prepares estimates of employment on a basis similar to income and earnings. Included in Table 1 are estimates of wage and salary employees, farm proprietors, and nonfarm proprietors. These employment numbers are used to determine earnings per worker. These values can be found in Table 1 and Figures 3 through 6 (on page 3).

Figure 3 shows total earnings per employee (wage and salary workers and proprietors) in Nebraska. From the chart, it can be

TABLE 1
Nebraska Personal Income

	1970	1973	1978	1979	1982	1983	1984	1985	% Change 1970-72 to 1983-85
TOTAL PERSONAL INCOME (thousands of current dollars)									
Personal income by place of residence	5,603,587	8,006,847	12,372,901	13,784,959	17,430,037	17,991,512	19,916,025	21,323,173	219.5
Nonfarm personal income	5,063,471	6,717,890	11,363,294	12,696,142	16,472,312	17,305,889	18,482,060	19,458,113	235.0
Farm income	540,116	1,288,957	1,009,607	1,088,817	957,725	685,623	1,433,965	1,865,060	94.7
Earnings by type by place of work	4,495,244	6,494,475	9,682,928	10,767,276	12,502,457	12,727,633	14,503,385	15,658,582	187.5
Wages and salaries	3,268,371	4,255,118	6,925,337	7,767,561	9,514,531	9,861,897	10,630,557	11,162,361	199.2
Other labor income	168,548	263,239	592,076	670,705	901,774	946,497	996,573	1,045,312	404.9
Proprietors' income	1,058,325	1,976,118	2,165,515	2,329,010	2,086,152	1,919,239	2,876,255	3,450,909	120.1
Farm	475,309	1,183,648	844,146	907,743	743,783	478,471	1,228,970	1,658,827	85.0
Nonfarm	583,016	792,470	1,321,369	1,421,267	1,342,369	1,440,768	1,647,285	1,792,082	153.4
Earnings by industry by place of work									
Farm	540,116	1,288,957	1,009,607	1,088,817	957,725	685,623	1,433,965	1,865,060	94.7
Nonfarm	3,955,128	5,205,518	8,673,321	9,678,459	1,1544,732	12,042,010	13,069,420	13,793,522	202.3
Population (thousands)	1,488	1,529	1,561	1,564	1,590	1,596	1,605	1,606	6.6
PCE Deflator (1982=100)	44.7	51.0	72.2	78.6	100.0	104.1	108.1	111.9	132.2
Total employment	705,841	761,412	845,965	869,454	852,214	856,775	887,876	908,137	22.8
Wage and salary	557,490	602,110	677,358	697,067	674,783	674,444	699,444	713,048	22.3
Farm proprietors	73,175	70,302	66,485	67,622	62,666	65,243	62,494	61,450	-12.6
Nonfarm proprietors	75,176	89,000	102,122	104,765	114,765	117,088	125,938	133,639	58.1
PER CAPITA PERSONAL INCOME (constant dollars, 1985=100)									
Personal income by place of residence	9,428	11,493	12,289	12,545	12,271	12,117	12,848	13,281	29.2
Nonfarm personal income	8,519	9,640	11,282	11,557	11,593	11,656	11,920	12,116	35.5
Farm income	909	1,850	1,002	991	674	462	925	1,161	-21.8
Earnings by type by place of work	7,563	9,320	9,614	9,801	8,799	8,572	9,354	9,750	16.2
Wages and salaries	5,499	6,106	6,876	7,071	6,696	6,642	6,856	6,950	21.0
Other labor income	284	378	588	611	635	637	643	651	104.7
Proprietors' income	1,780	2,836	2,150	2,120	1,468	1,293	1,855	2,149	-11.3
Farm	800	1,699	838	826	523	322	793	1,033	-25.8
Nonfarm	981	1,137	1,312	1,294	945	970	1,062	1,116	2.4
Earnings by industry by place of work									
Farm	909	1,850	1,002	991	674	462	925	1,161	-21.8
Nonfarm	6,654	7,470	8,611	8,810	8,125	8,110	8,429	8,589	22.2
Earnings per employee (constant dollars, 1985=100)									
Total employment	15,943	18,715	17,740	17,631	16,416	15,968	16,909	17,243	0.8
Wage and salary	14,676	15,506	15,846	15,864	15,778	15,718	15,733	15,654	5.4
Wage and salary (with other labor income)	15,433	16,465	17,201	17,234	17,273	17,226	17,208	17,120	9.3
Farm proprietors	16,261	36,942	19,678	19,111	13,281	7,883	20,357	26,995	-8.7
Nonfarm proprietors	19,414	19,537	20,054	19,314	13,089	13,227	13,540	13,410	-31.0

Underlying data are from the *Regional Economic Information System*, Bureau of Economic Analysis, Table SA7. Converted to a per capita or per worker basis and adjusted for price change using the personal consumption expenditure deflator by the Bureau of Business Research. Due to space limitations, all years are not shown. The complete table is available upon request from the Bureau of Business Research.

seen that the general trend in total earnings per employee has been slightly downward since the mid 1970s. Although they are approximately 1 percent higher in 1983-1985 than they were in 1970-1972, most of the growth occurred in the 1970s.

The primary reason for the lack of an upward trend in total earnings is proprietors' income. The two measures of labor income (wages and salaries and wages and salaries plus other labor income) both exhibited a slight upward trend over the 16 year period. Most of the growth occurred in the early 1970s, however. Since the mid 1970s, the two measures of labor income have been flat, with 1985 values lower than any of the four preceding years. In fact, since 1976 wage and salary earnings per wage and salary employee have varied between $15,600 and $15,900, with $15,864 the peak in 1979, and 1980's value of $15,613 the lowest of the 10 year period. Total labor earnings per employee varied between $16,900 and $17,300 since 1976. The highest value occurred in 1982 ($17,273) and the lowest value in 1976 ($16,922).

Because of the growth in the early 1970s, however, these two measures of labor income recorded some growth over the 16 year period. Wages and salaries per employee were up 5.4 percent and

(continued on page 6)

Figure 1

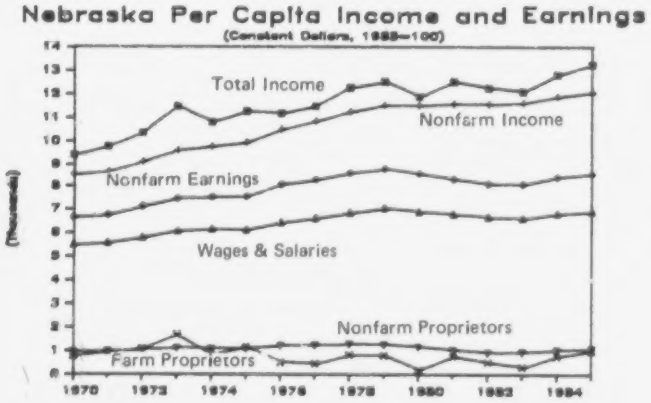


Figure 2

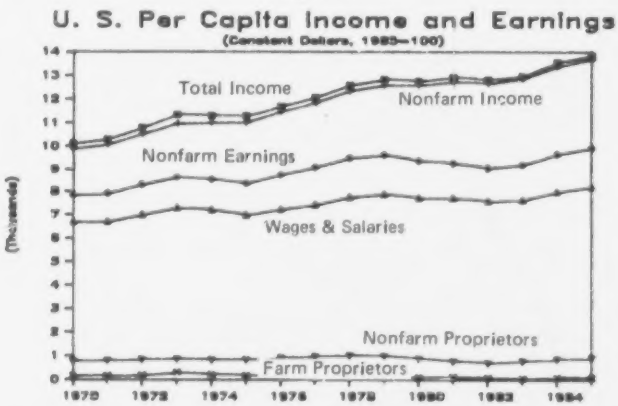


Figure 3

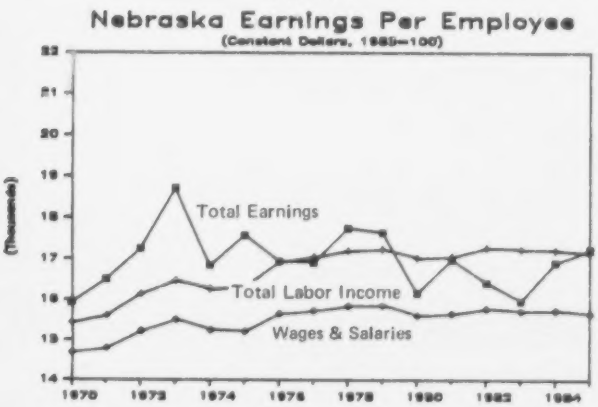


Figure 4

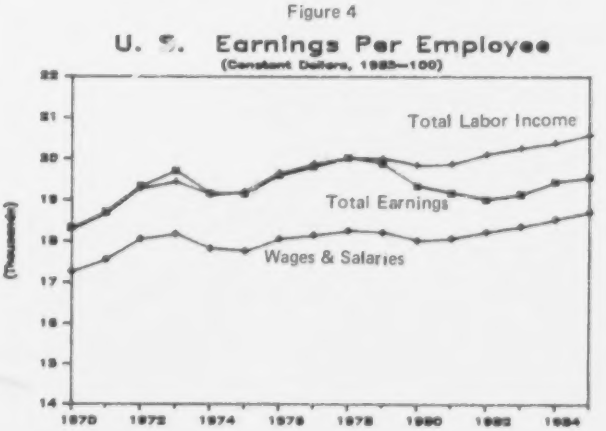


Figure 5

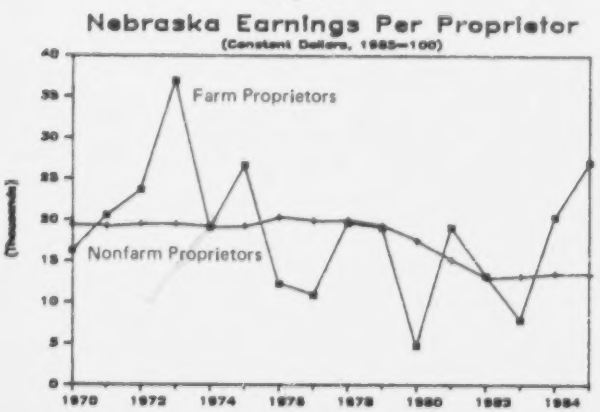
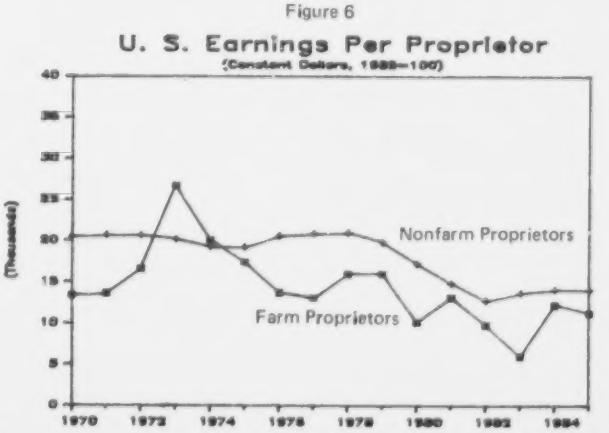


Figure 6



Review and Outlook

NATIONAL ECONOMY

The national economy continues to post modest growth. Third quarter GNP was an estimated 2.9 percent above year ago levels, somewhat below the long-term average of 3.5 percent. There are no conclusive indications of a sustainable economic pickup. The series of leading economic indicators has recorded small gains over the past six months, but these gains have been erratic. In some months, the series has declined.

On the positive side, some improvements are appearing in the U.S. balance of trade. Agricultural exports are projected to increase over the next twelve months. Any turnaround in the trade situation will be gradual and require years before the deficit and balance of trade are substantially reduced. Inflation remains around 2.0 percent. As long as oil prices are under $15 a barrel, inflation in 1987 should range between 2.0 and 4.0 percent.

Consumer spending has slowed following the auto-buying binge of September-October. Orders for nondefense durable goods are also weak. This implies little gain in employment in the next 12 months. For 1987, the Bureau of Business Research expects real economic growth to average around 3.0 percent. Employment at the national level will increase slightly, but unemployment will remain at 7.0 percent.

The risk of a recession continues to grow in the absence of any

(continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

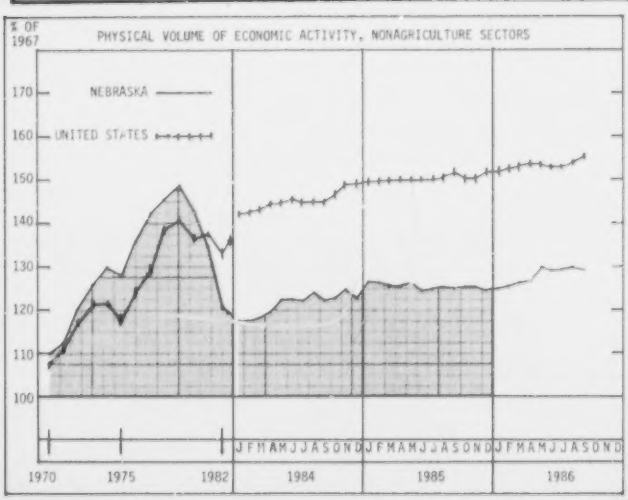
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

September 1986	Current Month as Percent of Same Month Previous Year		1986 to date as percent of 1985 to date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	na	na	na	na
Agricultural	na	na	na	na
Nonagricultural	105.2	104.5	104.1	104.4
Construction	91.2	105.3	98.4	106.7
Manufacturing	100.6	96.8	97.1	96.4
Distributive	106.8	106.5	105.1	106.5
Government	107.1	106.5	106.7	106.4
Physical Volume	na	na	na	na
Agricultural	na	na	na	na
Nonagricultural	103.0	102.6	101.6	102.6
Construction	88.5	102.1	95.6	103.7
Manufacturing	101.7	98.7	98.8	98.4
Distributive	105.0	104.7	102.9	104.3
Government	101.1	100.5	102.5	102.2

2. CHANGE FROM 1967

September 1986	Percent of 1967 Average	
Indicator	Nebraska	U.S.
Dollar Volume	na	na
Agricultural	na	na
Nonagricultural	390.8	483.6
Construction	249.7	506.4
Manufacturing	364.0	306.1
Distributive	407.6	578.8
Government	431.2	490.6
Physical Volume	na	na
Agricultural	na	na
Nonagricultural	128.8	155.4
Construction	67.5	136.9
Manufacturing	150.2	123.3
Distributive	123.4	175.3
Government	153.3	154.6

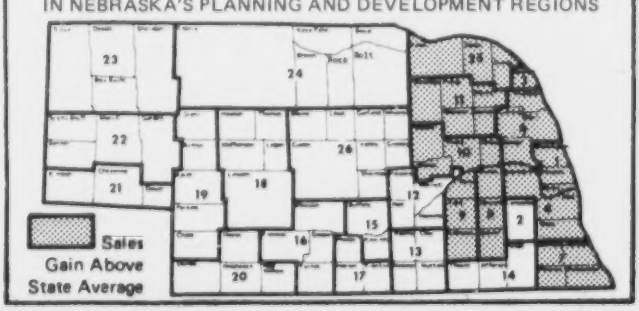


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

Region Number[1] and City	City Sales[2] Sept. 1986 as percent of Sept. 1985	Sales in Region[2] Sept. 1986 as percent of Sept. 1985	Sales in Region[2] 1986 to date as percent of 1985 to date
The State	107.0	110.7	107.1
1 Omaha	104.7	107.7	109.0
Bellevue	103.6		
Blair	121.3		
2 Lincoln	101.8	103.6	106.8
3 So. Sioux City	102.2	110.5	109.2
4 Nebraska City	107.4	119.0	109.2
6 Fremont	109.1	116.0	109.7
West Point	110.8		
7 Falls City	116.0	123.3	108.2
8 Seward	114.2	124.2	112.5
9 York	112.7	124.6	111.1
10 Columbus	110.1	122.6	107.6
11 Norfolk	116.0	130.5	110.2
Wayne	122.3		
12 Grand Island	109.7	116.9	105.0
13 Hastings	108.7	118.8	106.0
14 Beatrice	109.1	109.8	106.7
Fairbury	89.1		
15 Kearney	101.0	111.6	107.1
16 Lexington	92.9	109.9	100.9
17 Holdrege	121.3	123.9	103.8
18 North Platte	116.2	120.5	106.7
19 Ogallala	132.6	131.2	102.1
20 McCook	87.2	97.3	100.8
21 Sidney	97.0	96.8	92.7
Kimball	74.9		
22 Scottsbluff/Gering	102.5	102.0	102.5
23 Alliance	105.2	121.6	104.7
Chadron	143.5		
24 O'Neill	116.3	128.3	107.2
25 Hartington	97.1	124.8	114.0
26 Broken Bow	107.7	112.3	104.1

[1] See region map below.
[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.
Compiled from data provided by Nebraska Department of Revenue.

1986 YEAR TO DATE AS PERCENT OF 1985 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(continued from page 4)

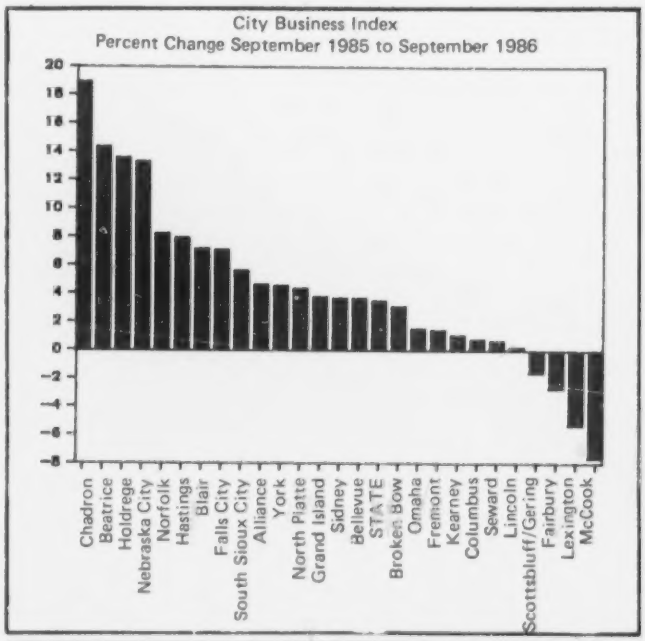
signs of a sustainable economic pickup. If consumers restrict their purchases in January, if businesses continue to hold back spending on plants and equipment, and if the federal government were to reduce its purchases of defense and nondefense items, a recession in 1987 is possible. At this time, the risk of a recession (a recession is defined as a decline in real output for two consecutive quarters) is rated at approximately two chances out of five. Policy actions required to avoid a recession would include a federal public works program and a continued liberal expansion of the money supply. Interest rates are unlikely to increase in the absence of any pickup in the economy. But look for rates to rise rapidly, however, if real growth begins to accelerate and exceeds 3.5 percent.

NEBRASKA ECONOMY

Nebraska's economy expanded during the first two quarters of 1986, but this expansion appears to have stalled. Output and employment in the last half of 1986 will equal approximately 1985's level. For all 1986, output and employment will average higher than 1985 because of the relatively better performance during the the first half of 1986. Real output is up an estimated 1.0 percent which is well below Nebraska's long-term increase of 3.25 percent.

The economy in 1987 looks very much like that of 1986. Employment and real output are expected to change little in Nebraska. The Bureau of Business Research's series of leading economic indicators for Nebraska has plateaued. It has yet to indicate the likelihood of a recession, but it certainly is not indicating an expansion. If the national economy expands throughout 1987, Nebraska will record a small gain. If the national economy falls into a recession in 1987, Nebraska's economy will likely record a decrease in real output of around 1.0 percent. "Steady as she goes" appears to be a very apt characterization of the Nebraska economy.

DONALD E. PURSELL



4. September 1986 — CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago: Employment[1]	Building Activity[2]	Power Consumption[3]
The State	100.0	95.0	91.4
Alliance	97.7	180.5	75.8
Beatrice	100.8	697.4	93.1
Bellevue	98.1	162.4	95.7
Blair	98.1	64.4	98.6
Broken Bow	100.8	75.7	78.2
Chadron	98.4	90.4	108.2
Columbus	101.3	36.0	95.2
Fairbury	100.4	135.6	93.1
Falls City	100.9	79.9	104.2
Fremont	101.1	47.1	92.2
Grand Island	101.9	66.3	87.8
Hastings	101.5	181.4	na
Holdrege	100.7	191.4	99.6
Kearney	101.4	90.0	94.0
Lexington	100.6	54.2	83.5
Lincoln	99.2	85.2	87.9
McCook	103.5	44.4	95.9
Nebraska City	100.8	652.8	84.0
Norfolk	100.8	105.2	91.9
North Platte	100.0	49.1	100.1
Omaha	98.1	95.6	96.2
Scottsbluff/Gering	100.5	48.0	88.5
Seward	101.0	25.0	97.9
Sidney	100.8	238.4	93.0
So. Sioux City	100.0	234.8	88.4
York	100.8	64.9	76.1

[1] As a proxy for city employment, total employment for the county in which a city is located is used.
[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.
[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

September 1986	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	330.2	101.8	102.1
Commodity component	283.5	98.7	99.3
Wholesale Prices	297.7	97.4	97.3
Agricultural Prices			
United States	222.0	101.4	94.9
Nebraska	213.0	101.4	95.6

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(continued from page 3)

total earnings per worker were up 9.3 percent and were close to the national growth of 5.1 percent and 8.9 percent, respectively.

Compared to the U.S. labor earnings, Nebraska followed roughly the same pattern until 1980. Since 1980, both wages and salaries and total labor income per employee have grown steadily for the U.S., in contrast to the stagnation for Nebraska.

Figures 5 and 6 review the trends in proprietors' income. Clearly, farm proprietors' income per farm proprietor and nonfarm proprietors' income per nonfarm proprietor have experienced downward trends. Nonfarm proprietors' income began dropping rapidly in 1980 and has yet to recover, as 1985's value of $13,410 remains approximately $6,000 below any year prior to 1980. Between 1970-1972 and 1983-1985, nonfarm proprietors' income per nonfarm proprietor dropped 31.0 percent. Nationally, nonfarm proprietors' income fell 32.4 percent.

Farm proprietors' income per farm proprietor also reported a downward trend, although high levels of production and large subsidies have pushed 1984 and 1985 earnings higher than most of the preceding years. In fact, 1985's value of $26,995 was second only to the $36,942 recorded in 1973. Despite the increases in 1984 and 1985, farm proprietors' income per farm proprietor was 8.7 percent less in 1983-1985 than it was in 1970-1972, compared to a 32.6 percent drop for the nation.

Figure 6 shows that farm and nonfarm proprietors' income for Nebraska followed the same general pattern as the U.S. The major exception occurred in 1985, when farm proprietors' income per farm proprietor fell for the U.S., but grew in Nebraska.

Several general conclusions can be reached from this article:

1. Most measures of income and earnings have grown on a price-adjusted per capita basis between 1970-1972 and 1983-1985.

2. Over this period, the rates of change for Nebraska and the U.S. are similar, with Nebraska outperforming the U.S. in the 1970s and lagging in the 1980s.

3. Most of the growth in Nebraska's economy occurred in the 1970s. Since 1979, per capita income and per capita nonfarm income have grown, but the components of earnings have been flat and have yet to reach their 1979 levels (on both a per capita and per worker basis).

JEROME A. DEICHERT 6

EXPORT PRICES FOR WHEAT AND CORN
(Basis FOB, U.S. Dollars Per Metric Ton)

	WHEAT				CORN	
	U.S. Gulf No. 2 H.W.	Argentina	Canada* No. 1 CWRS 12.5	Australia Std. White	U.S. Gulf No. 3 Yellow	Argentina
1981	177	189	212	175	134	138
1982	162	166	187	160	110	109
1983	158	138	185	161	137	133
1984	153	135	186	153	138	132
1985	138	106	178	141	113	103
1985						
May	137	112	180	145	118	109
June	134	107	178	141	117	111
July	130	107	171	134	114	112
August	124	98	163	128	103	101
Sept.	128	93	165	131	103	88
Oct.	130	92	173	134	100	90
Nov.	136	98	181	139	108	95
Dec.	139	114	184	144	111	100
1986						
Jan.	133	108	182	140	109	100
Feb.	131	102	177	133	106	92
March	136	97	183	139	101	87
April	125	96	182	137	102	86
May	120	90	175	131	107	90
June	108	85	151	114	104	90
July	103	81	142	104	86	84
Aug.	103	80	140	104	74	86
Sept. 2	104	81	138	102	70	90
Sept. 9	104	80	137	105	70	90
Sept. 16	104	79	138	105	65	68
Sept. 23	103	82	139	105	68	70
Sept. 30	105	81	140	107	72	73
Oct. 7	104	81	131	105	63	68
Oct. 14	106	81	126	108	65	69
Oct. 21	106	78	126	108	68	70
Oct. 28	105	79	129	109	73	71
Nov. 4	107	79	129	109	75	72

*In Store Export Elevators

Source: United States Department of Agriculture, Foreign Agricultural Service, *Grains, World Grain Situation and Outlook.*

BUSINESS IN NEBRASKA

PREPARED BY BUREAU OF BUSINESS RESEARCH
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TECHNOLOGY, PUBLIC POLICY, AND THE CHANGING STRUCTURE OF AMERICAN AGRICULTURE*

Over the next 15 years, American farmers will be offered an extensive array of new biotechnologies and information technologies that could revolutionize animal and plant production. The adoption of these technologies will be critical for shoring up the United States' lagging ability to compete in the international marketplace. Indeed, 83 percent of the estimated 1.8 percent annual increase in agricultural production needed to meet world agricultural demand by year 2000 must come from increases in agricultural yields, yields that can only be possible through the development and adoption of emerging technologies.

Yet if current agricultural policies remain in force, this new biotechnology and information technology era will also generate marked changes in the structure of the agricultural sector and of the rural communities that support farming. Some of these changes are already evident: farming is becoming more centralized, more vertically integrated. Large farms, though small in number, now produce most of this country's agricultural output. Operators of small and moderate-size farms, the so-called backbone of American agriculture, are becoming increasingly less able to compete, partly because they lack access to the information and finances necessary for adopting the new technologies effectively. Many such farmers must relocate, change to other kinds of farming, or give up farming altogether. The disappearance of these farm operations is causing repercussions for other businesses in the rural community and for the labor pool in general, which must absorb all those whose livelihood once depended on agricultural production.

Emerging Technologies and the Future Structure of Agriculture

New technologies have historically had significant impacts on structural change. New disease control technologies gave poultry and livestock farmers unprecedented opportunities to specialize and vertically integrate. Improvements in farm machinery fostered large-scale, specialized farm units.

Like their predecessors, the emerging technologies will make a considerable impact on farm structure, especially by 2000. **Biotechnologies will have the greatest impact because they will enable agricultural production to become more centralized and vertically integrated.** Although in the long run the use of new technologies will not increase the farmer's overall need for capital, there will be trade-offs: biotechnology will require less capital; information technology will require more.

The new technologies will allow increased control over end-product characteristics, for example less fat per unit of lean in meat animals or a specific color characteristic in corn. This implies that increased homogeneity within an agricultural product may result and that there will be a growing number of end products with engineered characteristics. This would require less sorting or grading to achieve increased homogeneity and a shift toward having more control over the production process so as to achieve homogeneity during production.

An anticipated economic consequence of this increased control over production is an increase in the practice of contracting. Contracting allows husbandry and cultural practices to be monitored and controlled closely during the production process. This greater process control leads to uniform product differentiation.

Biotechnologies will have relatively more important effects on resource concentration than will other technological developments. Even though mechanical technologies will continue to be important, they are not expected to have as important an impact on future structure. In particular, biotechnologies are expected to encourage closer coordination and greater process control in livestock production, permitting more contract livestock production. One example is the potential from these technologies for modifying milk at the farm rather than at the processing plant. This technology holds promise for producing more highly unsaturated fats in milk. If adopted, it would entail close coordination at the producer/first-handler markets and additional process control at the production level.

The biological technologies will encourage coordination in crop production as well. However, the magnitude of change in this area is expected to be relatively less for crops than livestock. Part of the reason is that biotechnologies for livestock production are further

*Excerpted from: Technology, Public Policy, and The Changing Structure of American Agriculture-Summary; Office of Technology Assessment

(continued on page 2)

advanced. The biotechnology era is expected to encourage closer vertical coordination, with a slight reduction in market access as a consequence. This situation would subsequently lead to fewer but larger farms.

The information technologies are expected to reduce barriers to entry and to increase market access without any significant change in vertical coordination or control at the producer/first-handler level--especially for crop agriculture. Information technologies hold the potential for significantly increasing the amount of information across markets. This impact would be attributable to improved communication of buyers' needs to production-level managers, which should result in more equality between buyers and sellers.

The largest farms are expected to adopt the greatest amount of the new technologies. Generally, 70 percent or more of the largest farms are expected to adopt some of the biotechnologies and information technologies. This contrasts with only 40 percent for moderate-size farms and about 10 percent for the small farms. The economic advantages from the technologies are expected to accrue to early adopters, a large proportion of which will probably be operators of large farms.

Impacts of Agricultural Finance and Credit

The severe financial stress of a large proportion of farmers and the recent regulatory and competitive changes in financial markets have combined to change significantly the financial framework of farming. **The farm of the future will be treated financially like any other business--it will have to demonstrate profitability before a bank will finance its operation.** Managing a farm efficiently and profitably, which will necessitate keeping up-to-date technologically, will be the key to access to credit.

The cost of credit, however, will be higher and more volatile. Interest on loans may be variable rather than fixed. **Moreover, given the concentration in the banking industry, decisions about extending credit more likely will be made at large, centralized banking headquarters far removed from a loan applicant's farm.** Loan decisions will thus be less influenced by the considerations of neighborly good will that frequently shaded decisions of local farm banks.

Congress will have to consider all these factors because the availability of capital will continue to be an important factor in agricultural production in general and in the adoption of agricultural technologies in particular. Readily available capital at reasonable rates and terms, plus technologies that aid profitability, provide a favorable environment for technology adoption. **Emerging technologies, for the most part, will pass the test for economic feasibility.**

The financing consequences of new technologies in agricultural production will probably depend on the relationships between three important factors: 1) the financing characteristics of the new technologies, 2) the creditworthiness of individual borrowers, and 3) the changing forces in financial markets that affect the cost and availability of financial capital. The financing characteristics suggest that most of the new technologies should be financed largely with short- and intermediate-term loans that are part of the normal financing procedures for agricultural businesses. **However, the technical characteristics of the technologies, together with the factors constituting the creditworthiness of individual borrowers, suggest that increased emphasis in credit evaluations will be placed on the farmers' management capacity, on their ability to demonstrate appropriate technical competence in using the new technologies, and on building human capital, where appropriate.** In some cases--particularly for Farmers Home Administration borrowers--significant investments in human capital, with related financing requirements, may accompany new technology adoption. This is consistent with the more conservative responses by lenders to the agricultural stress conditions of the early 1980s. Lending institutions themselves, in turn, must have sufficient technical knowledge and expertise to evaluate these management and credit factors along with other sources of business and financial risks in agriculture. Finally, some forms of new technology involving large investments and having long-run uncertain returns will probably rely more on equity capital for financing.

The changing regulatory and competitive forces in financial markets, including the preference for greater privatization of some credit institutions, means that the cost of borrowing for agricultural producers will likely remain higher and more volatile than before 1980 times and will follow market interest rates much more closely. Similarly, the continued geographic liberalization of banking and the emergence of more complex financial systems mean that the functions of marketing financial services, loan servicing, and credit decisions will become more distinct, with an increasing proportion of credit control and loan authority occurring subregionally and with regional money centers being located away from the rural areas. This will continue to fragment and dichotomize the farm-credit market so that commercial-scale agricultural borrowers will be treated as part of a financial institution's commercial lending activities and small, part-time farmers will be treated as part of consumer lending programs.

The competitive pressures on financial institutions and the risks involved will bring more emphasis on analyzing the profitability of various banking functions, including loan performance at the department level and individual customer level. Innovative lenders will strive more vigorously to differentiate their loan products and financial services, especially for more profitable borrowers, and will tailor financing programs more precisely to the specific needs of creditworthy borrowers. In turn, however, to compete for credit services these agricultural borrowers must be highly skilled in the technical aspects of agricultural production and marketing as well as in financial accounting, financial management, and risk analysis.

In general, most forms of new technology in agricultural production should meet the tests of both economic and financial feasibility, although the structural characteristics of the adopting farm units will continue to evolve in response to managerial, economic, and market factors. The structural consequences of these factors are severalfold:

(continued on page 3)

1. a continuing push toward larger commercial-scale farm businesses, with greater skills in all aspects of business management;

2. continuing evolution in the methods of entry into agriculture by young or new farmers, with greater emphasis on management skills and resource control and less emphasis on land ownership;

3. the continuing development of a marketing systems approach toward financing agriculture, with more sophisticated skills in marketing analysis by farmers and higher degrees of coordination with commodity and resource markets;

4. more formal management of financial leverage and credit by farmers, with greater diversity of funding sources by farmers and better developed markets for obtaining outside equity capital;

5. further development in financial leasing and greater stability in leasing arrangements for real estate and other assets; and

6. more complex business arrangements in production agriculture that accommodate various ways to package effectively debt and equity financing, leasing, management, accounting, and legal services for the future farm business.

Emerging Technologies, Policy, and Survival of Various Size Farms

The size and, therefore, the survival of farms is affected by several factors. Clearly, there are economies of size in many commodity areas covered by farm policy. **These economies motivate further concentration of resources.** In addition, present farm policy, more than any other policy tool, makes major impacts on farm size and survival. Although very large farms can survive without these programs, moderate-size farms depend on them for their survival.

This study finds that substantial economies of size exist for several major commodities. The commodities include dairy, corn, cotton, wheat, and soybeans. With the exception of corn, economies of size do not exist uniformly in all the production areas studied for these commodities. It should be noted that the analysis considered only technical economies of size. If it had also included pecuniary economies, additional production areas would have been found to have economies of size.

All of the commodity areas except rice will experience substantial gains in yield *as well as* significant economies of size. (No economies of size were found for rice.) Dairy, in particular, leads all commodities in economies of size and production increases from new technologies. These forces will combine to shift over time the comparative advantage in dairy production from the smaller dairies in the Great Lake states and Northeast to the larger dairies in the Southwest and West.

Overall, the combination of future yield increases from new technology and current economies of size in these commodities means that there will be substantial incentives for farms to grow in size. These powerful forces will continue, and may even speed up resource concentration in U.S. agriculture.

This study finds that farm programs, which include Commodity Credit Corporation (CCC) purchases and price and income supports, have major impacts on rates of growth in farm size, wealth, and incomes of commercial farmers. **Large farms increase their net worth significantly more than moderate-size farms under current farm programs and large farms account for a significantly large share of farm program payments.** In particular, price supports provide most of the wealth and growth benefits to large farms.

Removing farm programs reduces the probability of survival more for moderate-size farms than for large farms. **OTA's analyses find that large farms can survive and prosper without farm programs.** And, because these farms account for the vast majority of farm program benefits, significant savings in government expenditures could be realized if large farms were ineligible to receive program payments.

On the other hand, this study finds that moderate farms need farm programs to survive and be successful. Income supports, in particular, provide significant benefits to moderate farms, and the targeting of income supports to moderate farms is an effective policy tool for prolonging these farms' survival.

Those changes in tax policy that would be more restrictive have little impact on farm survival. Increasing the federal tax burden on farmers reduces the average annual rate of growth in farm size uniformly for all farm sizes.

Currently the financial position of many farmers is under severe stress. The situation is serious and may not improve for some time. Two alternatives most discussed by policymakers are interest subsidy and debt restructuring programs. **OTA finds that restructuring debt for highly leveraged farms does not appreciably increase their probability for survival.** The interest rate subsidy substantially increases average net income more than debt restructuring. It is the more effective strategy to ease financial stress. In addition, large farms with high debts are not as dependent on these financial programs for survival as moderate farms are.

Impacts on Rural Communities

The impacts of technological and structural change in agriculture do not end with the individuals who live and work on farms. **A variety of additional consequences are expected at the level of rural communities, consequences that directly or indirectly affect farms and farmers.** As with individual farmers, some communities are likely to benefit from change, while others are likely to be affected adversely. Much depends on the type of overall labor force in the community and on the opportunities for labor to move to other employment areas.

Hard-hit communities may need technical assistance to attract new businesses to their areas, to develop labor retraining programs, and to alter community infrastructure to attract new inhabitants. To accomplish these goals, federal policy will have to be complemented by regional and local policies.

Those rural communities that benefit from changes in agricultural technology and structure may do so in several ways. For example, as agriculture becomes more concentrated, some communities will emerge as areawide centers for the provision of new, high-value technical services and products. Likewise, some communities will

(continued on page 4)

emerge as centers for high-volume food packaging, processing, and distribution. In both cases, the economic base of these communities is likely to expand. However, unless total demand for agricultural commodities increases substantially, centralization of services, marketing, and processing will be like a zero-sum game in many areas. The market centers will benefit at the expense of other communities. Many of the communities that are bypassed will decline as a result of the process of centralization.

Communities also may benefit in those parts of the country in which the number of small and part-time farms is increasing. This phenomenon results in an increase in population in many rural areas and an increase in total income and spending in some of these areas. The increase in small farms may sustain additional retail establishments than would otherwise be the case, since purchases by small farmers may tend to be more from local sources than those by larger farmers. The operators of these farms in many cases subsidize their own production from off-farm income.

Impacts on Technology and Environmental Resource Adjustment

One of the major reasons that American agriculture has been so productive is because technological change has been fostered by the public sector and nurtured by a

(continued on page 5)

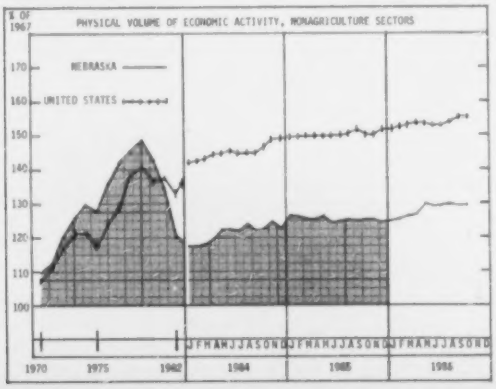
MEASURING NEBRASKA BUSINESS

1. ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES
CHANGE FROM PREVIOUS YEAR

October 1986	Current Month as Percent of Same Month Previous Year		1986 to Date as Percent of 1985 to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	na	na	na	na
Agricultural	na	na	na	na
Nonagricultural	105.10	104.30	104.20	104.40
Construction	85.00	103.30	97.10	106.30
Manufacturing	100.70	96.90	97.50	96.50
Distributive	107.10	106.30	105.30	106.50
Government	108.00	106.50	107.20	106.40
Physical Volume	na	na	na	na
Agricultural	na	na	na	na
Nonagricultural	103.40	102.20	101.80	102.50
Construction	82.70	100.50	94.40	103.40
Manufacturing	102.60	99.30	99.20	98.50
Distributive	105.40	104.70	103.20	104.40
Government	101.50	100.00	102.40	101.60

2. CHANGE FROM 1967

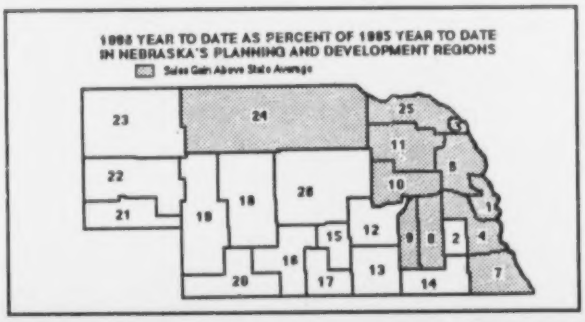
Indicator	Percentage of 1967 Average Nebraska	U.S.
Dollar Volume	na	na
Agricultural	na	na
Nonagricultural	393.10	482.10
Construction	234.20	514.60
Manufacturing	366.00	307.80
Distributive	410.30	573.70
Government	439.60	493.00
Physical Volume	na	na
Agricultural	na	na
Nonagricultural	129.40	154.10
Construction	63.30	139.10
Manufacturing	150.60	123.60
Distributive	124.20	173.60
Government	155.50	149.60



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

Region Number and City*	City Sales** October 1986 as percent of October 1985	Sales in Region** October 1986 as percent of October 1985	1986 to Date as percent of 1985 to Date
The State	108.40	111.10	107.50
1 Omaha	110.10	111.70	109.30
Bellevue	105.90		
Blair	99.40		
2 Lincoln	110.20	111.60	107.30
3 South Sioux City	130.40	113.30	109.70
4 Nebraska City	102.00	112.50	109.60
6 Fremont	104.90	113.50	110.10
West Point	114.10		
7 Falls City	103.00	116.00	109.00
8 Seward	120.00	118.10	113.10
9 York	99.60	109.90	111.00
10 Columbus	103.20	117.10	108.60
11 Norfolk	114.00	120.00	111.30
Wayne	120.60		
12 Grand Island	104.90	107.30	105.30
13 Hastings	116.10	115.30	106.90
14 Beatrice	112.20	110.30	107.00
Fairbury	92.00		
15 Kearney	107.10	108.40	107.30
16 Lexington	113.20	109.40	101.80
17 Holdrege	102.60	109.00	104.40
18 North Platte	102.70	104.60	106.50
19 Ogallala	101.60	104.50	102.30
20 McCook	101.10	103.50	101.10
21 Sidney	98.50	91.20	92.60
Kimball	74.20	99.60	104.10
22 Scottsbluff/Gering	104.30	103.50	102.60
23 Alliance	93.40	99.60	104.10
Chadron	112.80		
24 O'Neill	123.60	125.20	115.20
25 Hartington	121.90	125.20	115.20
26 Broken Bow	108.70	112.50	105.00

* See region map below.
** Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.
Compiled from data provided by Nebraska Department of Revenue



profit-seeking private sector. As a result, American consumers have enjoyed a plentiful supply of low-cost food and natural fiber. In addition, agricultural exports have made a major contribution to the overall development of export markets, to the benefit of the general economy. Biotechnology and information technology promise to offer more of the same, with the added bonus of less chemicals used in the production of food--whether for the control of pests, disease, and weeds, or for the production of commercial fertilizer.

Maintaining the productivity and competitiveness of U.S. agriculture in the public interest requires a balance between public and private sector support for technological change. Yet it would be wrong to imply that there are no risks. The conferring of property rights on discoveries of the agricultural research system has shifted the agricultural research balance between the public and private sectors toward the private sector. While the effects of this shift appear to be positive, concerns exist that a substantial portion of the benefits of even public research could be captured by private firm interests. Distribution of these benefits may be so unequally distributed that competitive performance is impaired. In addition, no scientifically acceptable methodology exists for weighing the risks or hazards of biotechnology research. To deal with such issues, the following policy suggestions are made:

* Steps should be taken to secure the public interest on which the USDA and land-grant university agricultural research system has been based. Assurance must be provided that the benefits of publicly supported research and extension are not captured in the form of excess profits by the private sector based on research property rights and increased private sector funding of public research. The effect would be to stifle the process of discovery and the dissemination of new knowledge.

* Major investments must be made to foster the development of human capital that is in a position to cope with the process of rapidly changing agricultural technology. This need extends from the training and development of the most basic biological research scientists, through the extension specialist and county agent, to the farmer who adopts the new technology and the banker who supplies the loan for its purchase.

IMPLICATIONS AND POLICY OPTIONS

The Issue of Farm Structure

This study indicates that the process of structural change in agriculture has already begun. Based on a continuation of current policies, past trends, and future technological expectations, the net result of this structural change could be the development of a farm structure composed of three agricultural classes:

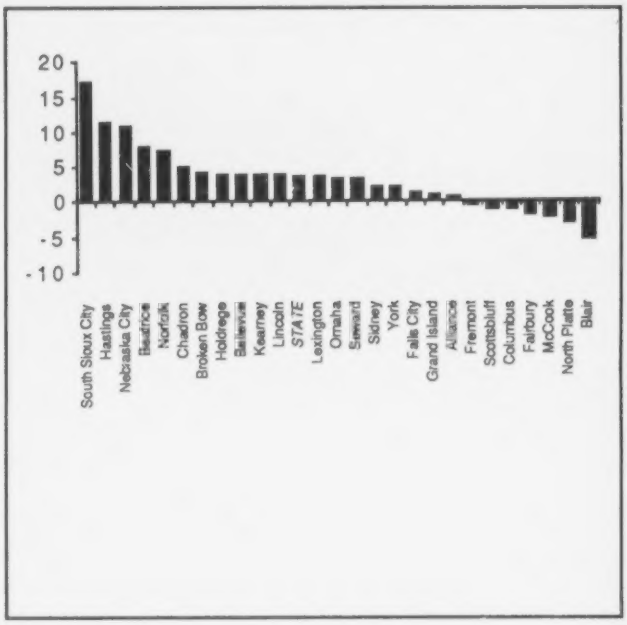
(continued on page 6)

5. PRICE INDEXES

October 1986	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	330.50	101.50	102.10
Commodity Componen	283.60	98.50	99.20
Wholesale Prices	298.30	96.90	97.30
Agricultural Prices			95.30
United States	226.00	98.30	
Nebraska	218.00	95.60	95.60

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture

City Business Index
Percent Change October 1985 to October 1986



4. October 1986 CITY BUSINESS INDICATORS

The State and Its Trading Centers	Employment (1)	Building Activity (2)	Power Consumption (3)
The State	99.30	90.30	101.10
Alliance	96.80	258.40	78.50
Beatrice	100.80	136.50	104.40
Bellevue	96.80	153.60	107.70
Blair	96.80	39.00	99.80
Broken Bow	101.00	88.50	90.40
Chadron	97.80	92.80	75.90
Columbus	101.20	45.30	101.50
Fairbury	99.70	119.80	98.00
Falls City	101.20	81.40	96.70
Fremont	100.30	48.30	98.70
Grand Island	101.70	57.60	88.20
Hastings	101.20	197.20	51.40
Holdrege	100.90	146.50	92.00
Kearney	100.50	96.70	92.40
Lexington	99.80	54.00	79.40
Lincoln	97.80	91.40	106.90
McCook	101.40	42.80	85.80
Nebraska City	101.10	649.20	90.20
Norfolk	100.10	106.90	89.10
North Platte	99.60	36.30	83.60
Omaha	96.80	93.30	120.20
Scottsbluff/Gering	100.20	46.00	116.00
Seward	101.20	23.70	108.90
Sidney	100.10	161.10	87.60
South Sioux City	98.70	213.30	88.00
York	101.10	132.50	73.90

(1) As a proxy for city employment, total employment for the county in which a city is located is used.
(2) Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.
(3) Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.
Source: Compilation by Bureau of Business Research from reports of private and public agencies.

1. The ***large-scale farm segment*** would be composed of a relatively small number of farms that produce the bulk of U.S. production. By year 2000 there could be as few as 50,000 large-scale farms producing as much as three-fourths of the agricultural production. This large-scale farm segment would be highly efficient in the performance of production, marketing, financial, and business management functions. Such farms would be run by full-time, highly educated business managers. Barring unforeseen acts of nature, farm operators would be able to predict their chances of making a proft before planting or breeding.

2. The struggling ***moderate-size farm segment*** would be trying to find a niche in the market and survive in an industrialized agricultural setting. The potential for the moderate farm finding that niche is rapidly becoming the center of the farm policy debate. Traditionally highly productive, efficient, moderate-size, full-time farms have been the backbone of American agriculture. It is still true that a moderate, technologically up-to-date, and well-managed farm with good yields is highly resilient. One key to the success of these farms clearly lies in the management factor. But more often than not, management has to be willing to accept a relatively low return on invested capital, time, and effort. With ever-increasing education requirements associated with farming, there will likely be less willingness by successful managers of moderate farms to accept a lower return for their services and for invested capital. Another key to the survival of moderate farms lies in access to state-of-the-art technologies at competitive prices. Cooperatives traditionally have performed that role. But cooperatives by and large are not conducting or funding basic or applied research in biotechnology and information technology. Also, like their predominantly moderate-size farmer members, cooperatives, too, have encountered financial difficulty.

3. The ***small, predominantly part-time farm segment*** tends to obtain most of its net income from off-farm sources. However, this segment is highly diverse. It includes wealthy urban investors and professionals who use agriculture primarily as a tax shelter and/or country home. It also includes would-be moderate farm operators who are attempting to use off-farm income as a means of entering agriculture on a full-time basis. Finally, this segment includes a number of poor, essentially subsistence, farmers who are vestiges of the war on poverty in the 1960s. Such farmers remain a significant social concern that must be dealt with from a policy perspective, although traditional farm price and income policy hold no hope for solving their problems.

Contemporary farm programs have fostered this trend toward three farm-size classes. Payments to farmers on a per-unit-of-production basis concentrate most of the benefits in large farms that produce most of the output. Large farms have been in the best position to take advantage of new technologies arising out of the public sector agricultural research system.

Without substantial changes in the nature and objectives of farm policy, the three classes of farms will soon become two--the moderate-size farm will largely be eliminated as a viable force in American agriculture. In addition, the problems of the small subsistence farm will continue to fester as an unaddressed social concern.

SUMMARY CONCLUSION

The biotechnology and information technology revolution in agricultural production has the potential for creating a larger, safer, less expensive, more stable, and more nutritious food supply. Yet it will exact substantial costs in potential adjustment problems in the agricultural sector and in rural communities. Those costs can be minimized by careful analysis, planning, and implementation. This study is only the first step in that direction.

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DECLINING LAND VALUES AND AGRICULTURE'S COMPETITIVE POSITION

In a report prepared for the U.S. Senate (*Governing the Heartland: Can Rural Governments Survive the Farm Crisis?*, 1986), questions are raised about the ability of rural America to survive low commodity prices.

A major structural change is underway in American agriculture. It is not news to Nebraskans that grain prices have tumbled and livestock prices lag behind other price increases. In real terms, grain and livestock prices of the 1980s are as low as they were in the 1950s or even 1940s. Declining grain prices combined with the threat of withdrawal of federal price support programs mean additional change may be underway for American agriculture.

Commodity prices are poor because of rising international grain supplies. It is doubtful that American agriculture can insulate itself from this worldwide condition. The Office of Technology Assessment suggests there are approximately 1.5 million middle-sized farms and ranches unlikely to survive in their present form through the year 2000 (*Technology, Public Policy, and the Changing Structure of American Agriculture*, March 1986).

The impact of this adjustment on local governments in rural Nebraska is just beginning. Land values have declined and are not projected to rise soon (Table 1). In fact, they may decline more. Since rural areas depend on property taxes, substantial adjustments in tax levies or curtailment of services will be necessary. In Nebraska approximately 80 of the 93 counties are dependent upon property tax receipts from agriculture. These counties are the same as those considered to be closely related to agriculture, (i.e., if 20 percent of their labor and proprietors income came from farming). In other words, counties with an economic base dependent upon agriculture face some serious revenue problems in the not too distant future.

Although the local tax base is declining, the prospects are dim for an increase in state aid. In Nebraska state aid to cities and counties has been the target of budget cutting. The federal revenue sharing program is being reduced. For rural counties dependent upon agriculture as the main economic activity, a rescue from Washington seems unlikely because of the deficit. Furthermore, state governments are under a mandate to increase their spending for economic development, a spending priority that is likely to rank above assisting local governments.

(continued on page 2)

NUMBER OF FARM ACRES ON FARMS AND AVERAGE VALUE PER ACRE
(TABLE 1)

Year	Number Of Farms (in thousands)	Land In Farms (millionacres)	Index Of Average Value Per Acre (1977=100)d/
1930	129.30	44.60	55.90
1935	134.00	46.90	39.40
1940	121.10	47.40	32.90
1945	111.40	47.60	36.00
1950	107.30	47.20	39.30
1955	95.80	47.50	45.40
1960	88.40	48.00	46.00
1965	78.90	47.80	51.90
1970	72.30	46.00	56.30
1975	67.00	47.90	77.90
1976	67.00	47.90	92.50
1977	66.00	47.80	100.00
1978	66.00	47.70	90.50
1979	65.00	47.70	103.50
1980	65.00	47.70	109.00
1981	65.00	47.70	108.70
1982	63.00	47.50	95.90
1983	62.00	47.40	82.90
1984	60.00	47.20	70.50

ECONOMIC EFFECTS OF DECLINING LAND VALUE

As land values decline, assessed valuations will fall. Either the amount of tax taken from land can decrease or mill levies can go up to compensate for reduced assessed values. If mill levies are increased, to hold tax collections constant, taxes may become more burdensome on agriculture, encouraging production to shift to areas outside Nebraska where the tax base is more diversified. For instance, with the nation generating 1.0 to 2.0 billion bushels of surplus corn, some areas may be removed from production. Some solutions call for across the board reductions in all states, under a regulatory or legislated approach. If the market removes land from production, then Nebraska taxes on agriculture may disadvantage Nebraska because of its higher tax structure. Table 2 presents property taxes on agriculture by state, compared to agricultural cash receipts. Taxes on Nebraska farm property constituted 3.91 percent of cash receipts. Nationally the average was 3.11 percent. Taxes on farm property as a percent of cash receipts were higher in Nebraska than in the nearby states of Kansas, Minnesota, Iowa, Missouri, South Dakota, and North Dakota. All of these states, with the exception of the Dakotas, are more diverse than Nebraska; it is possible to shift taxes to nonagricultural production in these states. An increase in local property taxes may exacerbate Nebraska's agriculture problems. If mill levies are raised more rapidly on Nebraska agriculture relative to agriculture in other states where the economic structure is more diverse and/or if Nebraska tax rates are higher than they are in competing states, Nebraska's ability to produce corn (or any grain) as efficiently will be hindered.

Assume for a moment that taxes cannot be raised on agricultural land because of the impact it will have on Nebraska's ability to compete. Retailers in small rural communities who have difficulty competing with the trade centers because of lack of volume would carry an additional burden. Homeowners would be asked to carry an additional burden to provide education, health and sanitation, roads, and other facilities in the rural areas. The cost to the retailer and the homeowner would rise. It is conceivable that these costs could rise to the extent that it would make Nebraska's smaller communities less attractive. Trade and population would be tempted to move to large communities where the costs are spread among a larger population.

IMPLICATIONS

The implications of declining land values in agriculturally dominated areas of Nebraska are unpleasant. The alternatives appear to be raising local mill levies (i.e., health, education, safety, and roads) upon residential and commercial operations in these counties to provide basic local government services . Agricultural, rural residential, and commercial properties will be taxed, weakening their competitive position compared to states with a more

(continued on page 3)

TAXES ON FARM PROPERTY
(TABLE 2)

State	Cash Receipts 1985 (Millions of Dollars)	Taxes On Farm Property - 1985	Taxes On Farm Property As % Of Cash Receipts
Alabama	2,077	15.20	0.73%
Alaska	26	0.50	1.93%
Arizona	1,529	32.00	2.09%
Arkansas	3,280	52.10	1.59%
California	13,970	231.10	1.65%
Colorado	3,164	65.80	2.08%
Connecticut	316	17.50	5.54%
Delaware	490	1.50	0.31%
Florida	4,741	96.60	2.04%
Georgia	3,327	72.00	2.16%
Hawaii	540	8.70	1.61%
Idaho	2,063	44.00	2.13%
Illinois	7,768	379.70	4.89%
Indiana	4,597	207.00	4.50%
Iowa	9,201	277.80	3.02%
Kansas	5,741	204.90	3.57%
Kentucky	2,871	37.70	1.31%
Louisiana	1,460	21.30	1.46%
Maine	378	14.80	3.92%
Maryland	1,148	28.90	2.52%
Massachusetts	389	16.30	4.19%
Michigan	2,850	241.30	8.47%
Minnesota	5,472	145.10	2.65%
Mississippi	2,136	35.00	1.64%
Missouri	3,668	104.70	2.85%
Montana	1,207	82.80	6.86%
Nebraska	7,206	282.10	3.91%
Nevada	222	3.60	1.62%
New Hampshire	107	7.00	6.54%
New Jersey	592	38.40	6.49%
New Mexico	1,086	11.30	1.04%
New York	2,564	163.20	6.36%
North Carolina	3,914	66.70	1.70%
North Dakota	2,746	94.50	3.44%
Ohio	3,941	131.00	3.32%
Oklahoma	2,664	83.60	3.14%
Oregon	1,778	63.50	3.57%
Pennsylvania	3,150	98.80	3.14%
Rhode Island	63	4.20	6.69%
South Carolina	1,032	16.10	1.56%
South Dakota	2,979	108.80	3.65%
Tennessee	2,057	52.70	2.56%
Texas	9,298	277.10	2.98%
Utah	548	22.60	4.13%
Vermont	384	19.30	5.03%
Virginia	1,627	55.50	3.41%
Washington	2,797	73.60	2.63%
West Virginia	241	6.80	2.82%
Wisconsin	5,112	281.10	5.50%
Wyoming	589	27.50	4.67%
United States	142,103	4423.10	3.11%

Source: Economic Indicators of the Farm Sector, United States Department of Agriculture

diverse economic base. Over time, the agricultural production base in Nebraska may be expected to lose its competitive position. If the taxes are placed upon commercial and residential areas, these activities may be impacted adversely. Without a substantial injection of state aid to local governments, small nondiversified farming and ranching communities seem destined to decline in Nebraska and other places in the Great Plains. A reduction in public services only will make Nebraska's rural communities less attractive to outside investors.

The prospects for substantial increases in state aid seem remote. The nonagricultural portions of the state's economy would have to increase taxes upon activities conducted in the metropolitan areas, wages and salaries, retail sales, etc., and then transfer this money to the agricultural communities. This could help to solve some of the rural communities' immediate problems, but it is doubtful that sufficient funds could be transferred over an extended period to halt the erosion that is likely to take place in rural Nebraska.

Counties most dependent upon agricultural property taxes are summarized in Table 3. They are ranked according to the percent of property taxes levied from agricultural land. Sixty-five counties generate 43.5 percent of their property tax from agricultural land or agricultural improvements.

Table 3 sets out the percent of farm income whether it is proprietors income or wage and salary income by the counties. Since agricultural income fluctuates widely in any given year, a three-year average is used. There is a close match between percent of income generated from agriculture and the percentage of property taxes generated from agricultural land and improvements.

To summarize, the alternatives facing the state's rural communities are as follows: increase taxes on agriculture; shift local taxes to commercial areas and homeowners; secure and increase the amount of state aid; reduce basic government services (such as road maintenance, education, public healthcare delivery, sanitary conditions, etc.); or diversify local economies toward some nonagricultural activities with an economic development program. Shifting taxes to agriculture and/or retailers and homeowners is likely to hasten the declines of the communities because it will weaken their competitive position. If taxes were to rise sufficiently in some small communities, it 's not unreasonable to expect an increasing abandonment of commercial real estate and residential real estate in these areas. The prospects for state aid do not seem to be particularly good. Reducing services may be difficult. Service reduction is incompatible with promoting economic development. Diversification of local economies will not stop the decline in many of these communities, but it may permit a few communities to improve their chances for expanding and surviving into the 21st century.

Donald E. Pursell

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MEASURING NEBRASKA BUSINESS

Year and Quarter	Millions of Dollars 1981:3	1985:3	1986:3	% Change 1985-1986	% Change 1981-1986
Total Personal Income	17,084	20,765	21,163	1.92	23.88
Nonfarm Personal Income	15,776	19,513	20,202	3.53	28.06
Farm Personal Income	1,308	1,252	961	-23.24	-26.53
Wages and Salaries	9,179	11,183	11,516	2.98	25.46
Other Labor Income	817	1,052	1,091	3.71	33.54
Proprietors' Income	2,499	2,829	2,791	-1.34	11.68
Farm Proprietors' Income	1,117	1,046	748	-28.49	-33.03
Nonfarm Proprietors' Income	1,382	1,783	2,043	14.58	47.83
Construction	667	825	966	17.09	44.83
Manufacturing	1,893	2,112	2,067	-2.13	9.19
Transportation and Public Utilities	1,330	1,598	1,635	2.32	22.93
Wholesale Trade	982	1,072	1,065	-0.65	8.45
Retail Trade	1,261	1,462	1,504	2.87	19.27
Finance, Insurance, and Real Estate	761	1,077	1,180	9.56	55.06
Services	2,019	2,815	3,027	7.53	49.93
Federal Civilian Government	341	427	470	10.07	37.83
Military Government	253	350	379	8.29	49.80
State and Local Government	1,522	1,903	1,965	3.26	29.11

ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

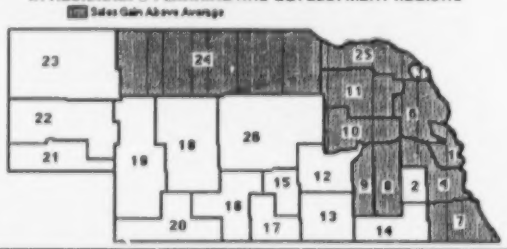
November 1986 Indicator	Current Month as Percent of Same Month Previous Year Nebraska	U.S.	1986 to Date as Percent of 1985 to Date Nebraska	U.S.
Dollar Volume	103.40	104.20	102.00	104.20
Agricultural	94.30	89.80	88.20	93.10
Nonagricultural	105.00	104.50	104.30	104.80
Construction	84.90	105.40	95.80	106.30
Manufacturing	101.00	97.20	97.90	96.60
Distributive	106.40	106.60	105.40	106.60
Government	107.40	105.70	106.70	106.40
Physical Volume	103.30	103.00	100.20	102.60
Agricultural	101.50	90.90	91.90	97.30
Nonagricultural	103.70	103.40	102.00	102.70
Construction	83.30	103.40	93.40	103.70
Manufacturing	103.40	99.90	99.70	98.70
Distributive	105.10	105.20	103.30	104.80
Government	103.40	101.70	102.50	102.20

2. CHANGE FROM 1967

Indicator	Percentage of 1967 Average Nebraska	U.S.
Dollar Volume	396.60	480.40
Agricultural	405.70	334.50
Nonagricultural	395.00	485.10
Construction	220.20	502.00
Manufacturing	372.30	310.10
Distributive	410.60	578.70
Government	496.30	495.30
Physical Volume	136.80	155.50
Agricultural	181.90	142.30
Nonagricultural	129.90	155.90
Construction	60.00	136.80
Manufacturing	152.60	124.50
Distributive	124.10	174.90
Government	157.90	156.90

1986 YEAR TO DATE AS PERCENT OF 1985 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS

Sales Gain Above Average



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

Region Number and City*	City Sales** November 1986 as percent of November 1985	Sales in Region** November 1986 as percent of November 1985	1986 to Date as percent of 1985 to Date
The State	106.40	106.80	107.50
1 Omaha	108.50	108.60	109.20
Bellevue	108.70		
Blair	102.80		
2 Lincoln	108.00	108.10	107.40
3 South Sioux City	120.70	120.60	110.60
4 Nebraska City	100.00	101.30	108.80
6 Fremont	100.80	105.20	109.70
West Point	104.90		
7 Falls City	103.90	104.40	108.60
8 Seward	112.90	105.50	112.40
9 York	104.30	108.50	110.80
10 Columbus	99.70	101.60	107.90
11 Norfolk	111.30	112.00	111.40
Wayne	102.50		
12 Grand Island	106.10	107.20	105.40
13 Hastings	105.90	104.50	106.70
14 Beatrice	99.20	97.40	106.10
Fairbury	93.40		
15 Kearney	102.80	101.20	106.70
16 Lexington	108.20	106.50	102.10
17 Holdrege	100.60	104.50	104.40
18 North Platte	104.90	104.90	106.40
19 Ogallala	126.40	113.30	103.20
20 McCook	104.30	98.40	100.90
21 Sidney	98.80	93.40	92.60
Kimball	80.80		
22 Scottsbluff/Gering	101.90	100.70	102.40
23 Alliance	102.10	96.90	103.50
Chadron	89.20		
24 O'Neill	127.90	114.40	108.60
25 Hartington	96.00	99.10	113.70
26 Broken Bow	96.30	102.00	104.70

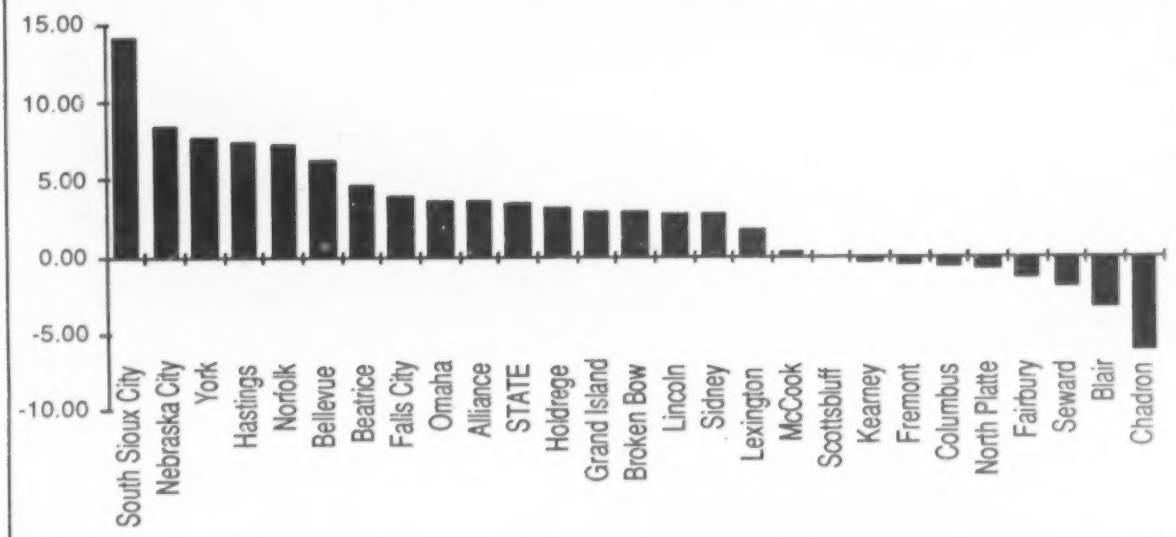
* See region map below.

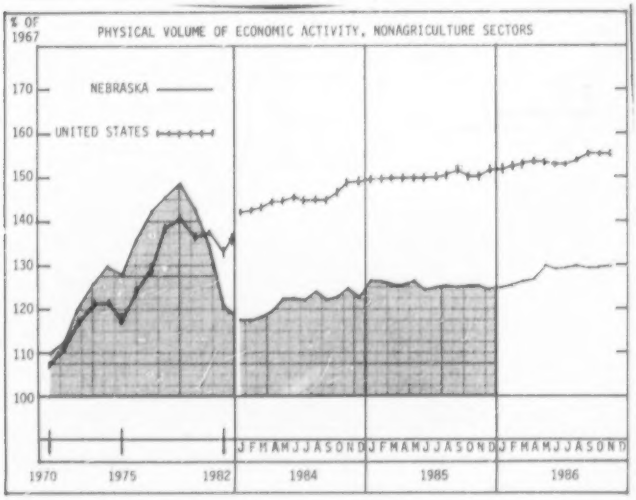
** Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue

MEASURING NEBRASKA BUSINESS

City Business Index
Percent Change November 1985 to November 1986





5. PRICE INDEXES

November 1986	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	330.80	101.30	102.00
Commodity Component	284.00	98.20	99.10
Wholesale Prices	298.70	96.40	99.20
Agricultural Prices			
United States	235.00	98.70	95.60
Nebraska	223.00	92.90	95.30

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture

4. November 1986 CITY BUSINESS INDICATORS

The State and Its Trading Centers	Employment (1)	Building Activity (2)	Power Consumption (3)
The State	100.90	88.10	98.60
Alliance	98.90	163.90	94.90
Beatrice	102.30	196.30	106.80
Bellevue	98.60	155.20	99.70
Blair	98.60	37.80	100.30
Broken Bow	102.50	173.20	106.80
Chadron	99.50	68.10	100.80
Columbus	102.50	59.30	96.10
Fairbury	101.90	97.60	98.90
Falls City	102.90	102.30	112.00
Fremont	102.50	54.70	85.20
Grand Island	103.20	65.00	94.60
Hastings	103.00	175.10	168.40
Holdrege	102.40	124.90	102.60
Kearney	102.10	49.00	78.20
Lexington	101.70	47.40	104.50
Lincoln	99.10	77.90	102.60
McCook	100.90	55.60	95.70
Nebraska City	102.60	390.10	99.00
Norfolk	102.10	108.70	92.20
North Platte	101.60	38.00	102.10
Omaha	98.60	93.30	100.30
Scottsbluff/Gering	102.40	56.30	99.40
Seward	103.00	12.70	106.10
Sidney	102.00	141.50	95.20
South Sioux City	100.50	222.00	96.00
York	102.50	221.50	102.10

(1) As a proxy for city employment, total employment for the county in which a city is located is used.
(2) Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.
(3) Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.
Source: Compilation by Bureau of Business Research from reports of private and public agencies.

TABLE 3

	1984 Ag Property Tax As % Total Property Tax		Income From Agriculture 3 Year Average		1984 Ag Property Tax As % Total Property Tax		Income From Agriculture 3 Year Average	
1	Banner	99.88	1 Arthur	41.70	48 Kearney	75.63	48 Hooker	12.12
2	Arthur	97.36	2 Loup	41.14	49 Burt	75.50	49 Fillmore	12.09
3	Wheeler	96.79	3 Banner	36.86	50 Morrill	74.91	50 Seward	11.79
4	McPherson	96.58	4 Sioux	33.33	51 Garfield	74.79	51 Valley	11.73
5	Loup	95.56	5 Hayes	31.94	52 Dixon	74.26	52 Richardson	11.66
6	Blaine	95.43	6 Rock	31.49	53 Stanton	74.10	53 Thayer	11.60
7	Sioux	95.09	7 Wheeler	29.91	54 Pierce	73.63	54 Colfax	11.58
8	Hayes	94.95	8 Perkins	28.90	55 Holt	72.34	55 Howard	11.40
9	Grant	94.04	9 Grant	28.40	56 Jefferson	71.85	56 Saline	10.85
10	Keya Paha	92.58	10 Blaine	28.34	57 Phelps	71.58	57 Hitchcock	10.73
11	Gosper	91.94	11 Garden	27.58	58 Knox	70.94	58 Dixon	10.60
12	Frontier	89.90	12 Antelope	27.29	59 Sheridan	70.10	59 Webster	10.48
13	Logan	89.56	13 Polk	26.02	60 Saunders	70.08	60 Kimball	10.18
14	Pawnee	88.46	14 Gosper	25.49	61 Nemaha	69.95	61 Otoe	9.75
15	Dundy	88.00	15 Dundy	24.72	62 Cuming	69.50	62 Cheyene	9.65
16	Garden	86.92	16 McPherson	24.05	63 Brown	68.56	63 Jefferson	9.64
17	Franklin	85.22	17 Keya Paha	23.73	64 Richardson	68.05	64 Sheridan	9.35
18	Sherman	85.21	18 Greeley	23.32	65 Valley	66.69	65 Platte	9.06
19	Hitchcock	84.13	19 Burt	23.30	66 Wayne	65.03	66 Thomas	8.68
20	Perkins	83.76	20 Hamilton	23.23	67 Colfax	63.75	67 Nuckolls	7.61
21	Polk	83.59	21 Butler	22.98	68 York	63.60	68 Wayne	7.34
22	Greeley	83.07	22 Nance	22.30	69 Kimball	62.61	69 Dawson	7.30
23	Rock	82.74	23 Kearney	22.07	70 Seward	62.47	70 Box Butte	7.18
24	Thomas	82.08	24 Franklin	21.68	71 Saline	62.38	71 Washington	7.09
25	Webster	81.92	25 Logan	21.26	72 Dawson	61.64	72 Keith	6.98
26	Harlan	81.89	26 Boone	19.45	73 Washington	60.67	73 Garfield	6.89
27	Furnas	81.58	27 Morrill	18.92	74 Otoe	60.03	74 Custer	6.65
28	Boyd	81.45	28 Brown	18.61	75 Cheyenne	58.83	75 Gage	6.51
29	Cherry	81.39	29 Stanton	18.50	76 Gage	55.09	76 Dodge	6.51
30	Butler	80.57	30 Chase	18.37	77 Keith	50.94	77 Dawes	6.44
31	Johnson	80.45	31 Clay	17.66	78 Red Willow	50.03	78 Adams	6.13
32	Nance	80.09	32 Phelps	16.47	79 Box Butte	47.92	79 *Nebraska*	5.65
33	Thurston	80.08	33 York	16.10	80 Cass	47.11	80 Johnson	5.41
34	Clay	80.00	34 Deuel	15.72	81 Dawes	45.00	81 Madison	5.38
35	Chase	79.80	35 Sherman	15.38	82 Buffalo	44.83	82 Cass	5.37
36	Antelope	79.79	36 Merrick	15.37	83 *Nebraska*	43.97	83 Knox	5.36
37	Merrick	79.70	37 Pawnee	15.22	84 Lincoln	39.82	84 Thurston	5.16
38	Thayer	79.69	38 Cuming	14.96	85 Adams	38.93	85 Furnas	4.66
39	Hamilton	79.41	39 Boyd	14.68	86 Dodge	36.85	86 Red Willow	4.60
40	Howard	78.83	40 Cedar	14.30	87 Platte	34.44	87 Buffalo	4.18
41	Fillmore	78.52	41 Cherry	14.22	88 Dakota	32.76	88 Lincoln	3.94
42	Boone	78.25	42 Holt	13.83	89 Madison	29.63	89 Scotts Bluff	3.73
43	Hooker	78.21	43 Saunders	12.80	90 Scotts Bluff	28.55	90 Dakota	3.28
44	Deuel	77.86	44 Frontier	12.46	91 Hall	24.42	91 Hall	2.77
45	Custer	77.52	45 Harlan	12.40	92 Lancaster	9.28	92 Lancaster	0.85
46	Nuckolls	77.18	46 Pierce	12.37	93 Sarpy	6.78	93 Sarpy	0.83
47	Cedar	77.04	47 Nemaha	12.17	94 Douglas	1.67	94 Douglas	0.25

Source: Bureau of Economic Analysis—Washington, D.C.

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MANAGING CHANGE

by
Gary Schwendiman, Dean
College of Business Administration
University of Nebraska—Lincoln
from a speech given to the
Lincoln Chamber of Commerce

Many of you have made changes in your businesses, and you have not found it easy. Mark Twain once said that "A man who holds a cat by the tail learns something he can learn in no other way." I suspect that many of you feel as if you personally have held that cat. Changes in technology, social norms, and the economy are happening rapidly. We must work hard to keep up-to-date in adapting and adjusting to change.

Two Kinds of Change

One can define two kinds of change: structural change and cyclical change. Understanding the difference between these kinds of change can be worth millions of dollars. Structural change is a fundamental, permanent change in the way things such as manufacturing, construction, communicating, growing crops, etc. are done. Such permanent change usually is driven by scientific discovery and new technology. When structural change occurs, society never returns to the old way of doing things.

Cyclical change is a recurring, fluctuating change that is due to government policy or group opinions and attitudes. The story of the Hunt family of Texas may help you differentiate structural change from cyclical change. What the Hunts did was to bet their fortune that inflation, which was increasing in the late 1970s, was a structural change. They invested in land and silver, with the expectation of protecting their money from inflation. When inflation plummeted due to changes in government policy, their fortune crashed with it. (Inflation is not a structural change, it is a cyclical change.)

Here are some examples of structural changes. Communication has gone through a series of structural changes from telegraph, to telephone, to radio, to television, to satellite. Now communication around the world can be instantaneous. Every one of those changes was structural, a permanent change due to advances in science.

Energy sources have changed from wood, to oil, to natural gas, to nuclear fission. The next new source on the horizon is fusion energy. If we achieve fusion, it means making electricity out of water. It will be a major structural change if we can accomplish it.

Not all changes are positive. We have gone from clubs, to swords, to guns, to bombs, to missiles, to nuclear bombs, and now to laser weapons.

The structural changes that are occurring in agriculture have a big impact in Nebraska. We have gone from horse to machinery, from the use of elementary chemicals to sophisticated fertilizers and pesticides. We now have biogenetic alteration of plants and animals. All of these technologies are available around the world, which is one of the reasons we have a world food surplus. Twenty-five nations of the world consistently are producing surpluses and trying to sell these surpluses in world markets. Current estimates are that less than 3 percent of the world population faces physical risk from hunger. Where there is hunger in the world, it is a problem of the social system and of distribution...not of world food supply.

Let me give you an idea of what may be coming in biogenetics. I was in a laboratory about six months ago where they were working on pigweed. Why would anybody work on pigweed? In a drought when almost all other plants are dead, pigweed is flourishing—because it is so resistant to drought. The scientists are trying to find the gene that controls drought resistance in pigweed and transplant that gene into corn, soybeans, and other crops. If that structural change is accomplished, it will change the way our crops are grown forever. In the same lab, scientists were working toward a soybean oil substitute. These scientists predict that with a few genetic changes, a new plant form they have discovered could provide such a soybean oil substitute. The kicker here is that the plant grows wild in seawater.

Those kinds of changes are on the horizon. With an investment of about $3 billion, the entire human genetic structure could be mapped. If we make that investment, it is possible that not long after the turn of the century we may be able to reproduce an entire human being from just one of the body cells. What a structural change that will be!

Cyclical change is different. Inflation rates and oil prices are examples. The Hunts bet that inflation was a structural change, but it was not. It was a cyclical change because it is under the control of government. Economic expansions and recessions are cyclical. We have had 43 recessions and 43 recoveries in this nation since we started keeping records. We will have another recession--and another recovery.

One difference between a structural change and a cyclical change is that a structural change often is driven by an underlying change in technology. If something is changing in your business, ask yourself, "What is driving this change?" If it is government policy, it is probably cyclical; if it is technology, it is likely structural. If your current success is due to government policy or subsidy, watch out—things can change rapidly. If technological changes are occurring, bringing structural change, make sure you stay up-to-date and competitive.

Sometimes there are structural changes with cyclical changes occurring within them. This sometimes tricks individuals into believing that a structural change is only cyclical. The structural changes that bring greater efficiency in agricultural production force the real price of commodities down over time. We will have cyclical eruptions where soybean prices or wheat prices rise temporarily because of a supply/demand cycle, but it is important not to confuse that with structural change. The underlying real price trend is down for almost anything that is produced using advancements in technology. That is certainly true in agriculture.

Although adapting to all of these changes will be difficult, the changes bring very good news and a new challenge. If we can avoid nuclear war or other disasters for the next 15 years, we will see unprecedented economic prosperity in the world because of the changes that technology is bringing. It is likely that the biggest problem we will face in 15 years will be how to distribute the resources of a technologically advanced society in a way that preserves and enhances the human spirit.

The Change Curve

Let's look at change now in another way. The graph in figure 1 represents a conceptual view of change.

On the left side of the graph, you see the amount of change. On the bottom of the graph are the years 1980, 1985, and 1990, a dimension of time. You see that the rate of change is accelerating, which means that the business environment is going to change much more between 1985 and 1990 than it did between 1980 and 1985—maybe four times as much.

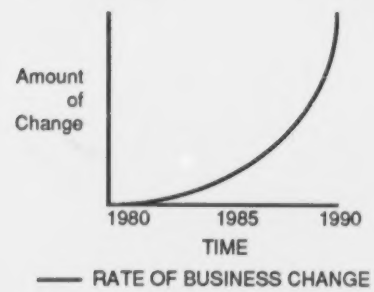

Figure 1

All businesses have a rate at which they are comfortable with change. Change at that rate is represented conceptually by the dotted line. (Figure 2.)

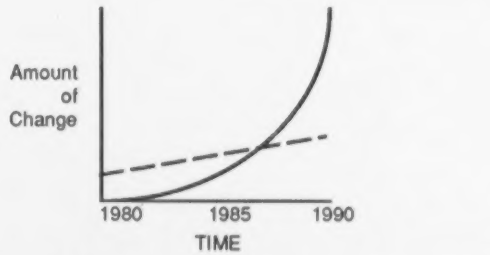

Figure 2

If you continue to change at the same rate from 1985 on as you did between 1980 and 1985, by the year 1990 you are far behind the change curve. As the change curve accelerates, the rate of organizational change sufficient for the mid 1980s is not going to be good enough to keep you ahead of the change curve in the future.

For the business that refuses to change at an accelerated rate to stay ahead of the change curve, usually one of two things happens. It either fails or it seeks government protection or subsidy because it no longer can compete in the marketplace. It then remains in business as long as it has political power to maintain its subsidy.

Change has no names on it; it affects everybody—a company that does not accelerate its rate of change will fall behind the change curve. What is the answer? Accelerated adaptation to change.

A company may start its response to a rapidly changing environment by saying "Something is going on here, we do not quite understand what. We better form a strategic planning task force to see what radical changes we must make in our thinking and business strategies." They then speed the rate that they are willing to change so they can continue in business.

Now, I want to say a few things about Nebraska.

How Many Farmers?

The number of persons involved in production agriculture in Nebraska and the nation continues to decline. In the late 1800s, 75 percent of the Nebraska workforce was engaged in direct agricultural production. In 1986, it was less than 10 percent. Of the 2.3 million farms in the United States, 700,000 produce 85 percent of the food and fiber. By the year 2000, the U.S. will need only 50,000 farming units to meet 75 percent of all domestic and export needs. That means you can take the owners of the country's farming units that produce three-fourths of our domestic and export needs, put them in Memorial

Stadium, and still have room for the University of Nebraska-Lincoln student body.

Subsidies

Depending on how one measures it, between 40 percent and 60 percent of Nebraska net farm income now comes from government payments of one kind or another. We should not delude ourselves. It is likely these subsidies will diminish and end eventually. Those who bet on subsidies continuing indefinitely are betting that the U.S. taxpayers will continue to support the production of many billions of dollars worth of food that clearly is needed no longer.

Reduced Need For Agricultural Land

It is probable that one-third to one-half of the current agricultural land in Nebraska will be out of production by the year 2000. Why? Because advances in biotechnology will reduce the amount of land needed for agricultural production. At the same time, many other nations will continue to increase their agricultural production, which will reduce U.S. export markets.

Population

Population statistics play a role in this too. Believe it or not, the growth rate for world population peaked in 1965. Birth control technology has brought the growth rate down substantially. If birth control technology can be made available around the world, population growth should continue to slow significantly and eventually stabilize.

With world food production increasing dramatically and the world population growth rate decreasing, you can see that the world is facing some enormous food surpluses. Other nations of the world are expanding their food supply; for example, in the last ten years, Brazil has brought into production agricultural land that is the equivalent in size to three Nebraskas.

When discussing Nebraska population, it comes as no surprise that nonmetropolitan population in Nebraska grew 3.4 percent from 1967 to 1984 while metropolitan population grew 19.3 percent. Nearly 80 percent of Nebraska's counties reached their peak population prior to 1940. Now the population is becoming more and more concentrated in a handful of counties; 67 percent of the state population is in 20 percent of the counties. The age structure varies significantly between the two parts. Total Nebraska employment rose from 623,000 in 1967 to 802,000 in 1985—that is an increase of 28.7 percent. Nonagricultural employment rose 42.7 percent, while agricultural employment dropped by 33.5 percent.

Where Are the Jobs?

Employment changes will recur in Nebraska. When compared with 1967, percentage employment changes in Nebraska have been as follows:

Services	+92.3 percent
Finance,insurance,real estate	+72.3 percent
Wholesale and retail trade	+51.3 percent
Government (including public utilities)	+46.8 percent
Transportation, communications, utilities	+19.8 percent
Manufacturing durables	+13.9 percent
Construction	+12.2 percent
Agriculture	-33.5 percent

A clear trend in the Nebraska employment figures is a move toward service employment (transportation, public utilities, trade, finance, insurance, real estate, services, government, education, information) and away from goods-producing employment (agriculture, construction, manufacturing). In 1967, goods accounted for 35 percent of employment and services 65 percent. In 1985, goods were down to 24 percent and services up to 75 percent. This is a structural change precipitated by technological advances that reduce manpower needs and increase efficiency in the production of goods.

This does not mean that agriculture and manufacturing are not important employers in the Nebraska economy—they are. But they are relatively less important in maintaining and creating jobs than they have been in the past.

One also should note that Nebraska has a concentration of employment in insurance when compared to other states. More than 20,000 Nebraskans are employed in the insurance industry.

(continued on page 6)

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MYTHS OF ECONOMIC DEVELOPMENT

Economic Development Myth Number 1: At a recent Nebraska meeting on economic development, listeners were informed that if a new job is created and the employee pays $1,000 in state and local taxes, $5,000 additional state and local tax dollars are generated. There are two errors here. The first is to assume a super multiplier of 5. For the state of Nebraska, the multiplier is more likely to be a maximum of 2.25. In many cases, it is considerably less. The second error is the idea that economic development is merely creating jobs. Jobs are jobs are jobs according to this theory. It is important to note that some jobs are more important than others, especially those jobs that create exports. If a new retail trade merchant enters the scene and creates 50 jobs, few Nebraska exports are created. The jobs result in Nebraskans redistributing how they spend their funds. If the new retail firm, however, produces computer software or writes insurance for clients in California, New Mexico, Connecticut, and other points outside of Nebraska, Nebraska has an export product—the jobs are superjobs with a larger impact than others. If it were a simple matter of creating jobs, we would have solved the economic

(continued on page 5)

ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

December 1986	Current Month as Percent of Same Month Previous Year		1986 to Date as Percent of 1985 to Date	
Indicator	Nebraska	U.S	Nebraska	U.S.
Dollar Volume	102.70	103.70	101.60	104.10
Agricultural	89.10	86.60	85.30	92.40
Nonagricultural	105.50	104.10	104.30	104.40
Construction	92.80	102.80	95.60	106.10
Manufacturing	99.70	96.70	98.00	96.60
Distributive	107.60	106.40	105.60	106.50
Government	105.00	105.60	106.50	106.30
Physical Volume	102.90	102.80	99.90	102.60
Agricultural	98.00	91.60	89.30	96.70
Nonagricultural	104.20	103.20	102.20	102.70
Construction	90.80	100.60	93.20	103.60
Manufacturing	102.30	99.50	99.90	98.70
Distributive	106.40	105.20	103.60	104.50
Government	101.30	101.90	102.40	102.20

2. CHANGE FROM 1967

Indicator	Percentage of 1967 Average Nebraska	U.S.
Dollar Volume	403.00	484.00
Agricultural	449.80	349.50
Nonagricultural	395.70	488.30
Construction	226.20	500.70
Manufacturing	354.60	309.70
Distributive	418.60	584.50
Government	441.00	498.00
Physical Volume	139.60	156.70
Agricultural	205.40	154.00
Nonagricultural	129.50	156.70
Construction	61.50	136.00
Manufacturing	145.30	124.30
Distributive	126.40	176.50
Government	154.50	157.70

3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

Region Number and City*	City Sales** December 1986 as percent of December 1985	Sales in Region** December 1986 as percent of December 1985	Sales in Region** 1986 to Date as percent of 1985 to Date
The State	104.70	110.20	107.80
1 Omaha	104.40	109.80	109.30
Bellevue	95.60		
Blair	113.70		
2 Lincoln	106.40	112.20	107.90
3 South Sioux City	114.40	122.00	111.60
4 Nebraska City	116.60	115.80	109.50
6 Fremont	106.40	111.20	109.80
West Point	107.50		
7 Falls City	116.00	116.50	109.40
8 Seward	113.00	112.10	112.40
9 York	106.10	116.80	111.40
10 Columbus	108.10	111.20	108.30
11 Norfolk	108.70	116.10	111.90
Wayne	112.90		
12 Grand Island	106.10	108.10	105.70
13 Hastings	109.70	109.60	107.00
14 Beatrice	105.70	109.80	106.50
Fairbury	98.70		
15 Kearney	106.50	113.10	107.30
16 Lexington	101.20	114.20	103.30
17 Holdrege	103.90	105.80	104.50
18 North Platte	97.60	104.10	106.10
19 Ogallala	115.60	113.90	104.10
20 McCook	99.80	109.60	101.80
21 Sidney	92.90	94.50	92.80
Kimball	76.20		
22 Scottsbluff/Gering	106.60	112.20	103.40
23 Alliance	101.40	97.50	102.80
Chadron	71.90		
24 O'Neill	116.00	115.10	109.20
25 Hartington	123.70	121.00	114.40
26 Broken Bow	103.10	111.60	105.40

* See region map

** Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue

1. Detailed tables and graphs of the components of county personal income are available from the Bureau of Business Research.
2. Requests for single counties will be honored without charge.
3. A complete set of data for all 93 Nebraska counties is available for $25.00. Call (402) 472-2334 or write to Bureau of Business Research, 200 CBA, University of Nebraska—Lincoln, Lincoln, Nebraska 68588-0406.

development problem long ago. We could create 1,000 government jobs, which would produce $1 million in state and local revenue, which in turn would create another $5 million in tax dollars.

Economic Development Myth Number 2: In testimony before the legislature on the construction of a new facility for the University, it was pointed out that this facility would generate additional tourism dollars. It was asserted that these dollars would turn over within the local economy three times, only a slightly less powerful multiplier than alluded to in myth number 1.

Something seems to be amiss in this economic development project. The football stadium is filled to capacity—additional seating would necessitate an expansion of the stadium. The multiplier for football tourism spending locally is going to be less than it would be for the state. The multiplier is probably around 0.75 in Lincoln, meaning each dollar spent for tourism in Lincoln will generate an additional 75 cents worth of spending. It could be slightly higher, but it is most unlikely that it would approach the 3.0 level recently noted.

Donald E. Pursell

4. December 1986 CITY BUSINESS INDICATORS

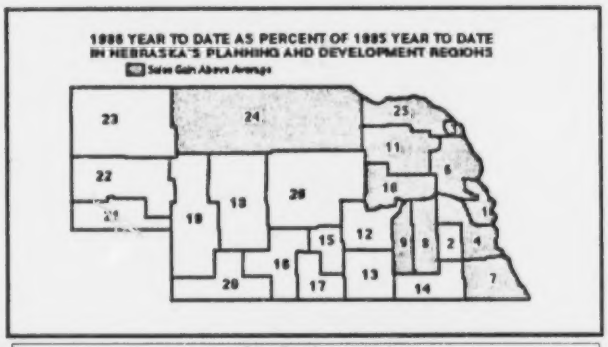
The State and Its Trading Centers	Employment (1)	Building Activity (2)	Power Consumption (3)
The State	98.90	84.60	88.80
Alliance	99.70	152.60	116.50
Beatrice	98.00	228.40	76.70
Bellevue	84.60	148.30	101.20
Blair	101.00	50.20	88.10
Broken Bow	98.30	258.00	79.80
Chadron	99.60	85.00	85.10
Columbus	99.60	72.30	82.80
Fairbury	99.80	73.00	91.20
Falls City	99.30	110.80	97.40
Fremont	101.30	53.90	80.10
Grand Island	100.70	85.50	84.90
Hastings	99.30	146.30	234.00
Holdrege	99.30	112.40	75.20
Kearney	102.70	28.60	105.90
Lexington	90.60	44.90	82.60
Lincoln	101.00	65.10	89.40
McCook	98.70	95.20	78.50
Nebraska City	104.70	248.90	89.70
Norfolk	97.00	107.30	85.20
North Platte	100.80	42.70	85.10
Omaha	105.40	91.90	88.50
Scottsbluff/Gering	102.80	78.30	88.80
Seward	101.40	11.40	89.20
Sidney	102.20	171.40	87.00
South Sioux City	107.30	260.50	63.60
York	101.30	289.90	81.00

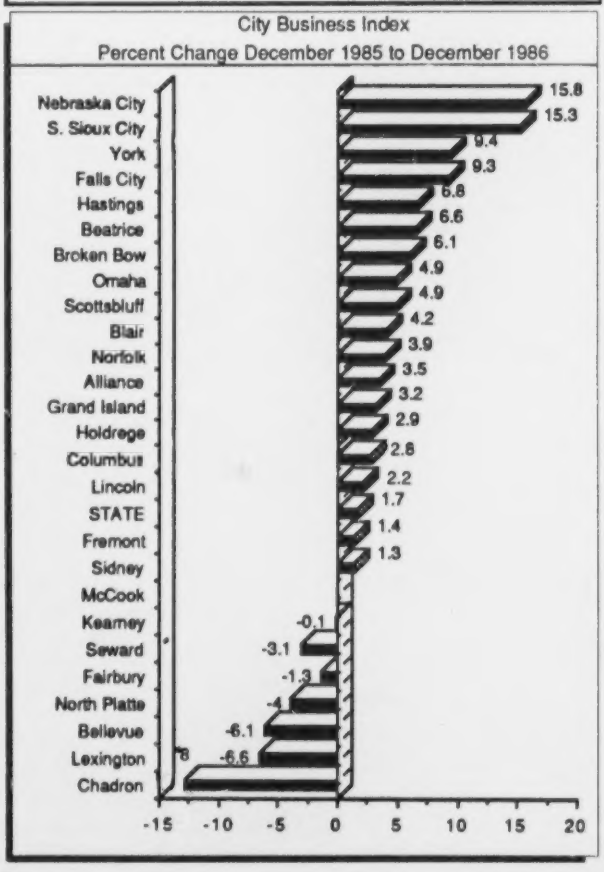
(1) As a proxy for city employment, total employment for the county in which a city is located is used.
(2) Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.
(3) Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.
Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

December 1986	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	331.10	101.10	101.90
Commodity Component	264.20	98.00	99.00
Wholesale Prices	298.10	96.10	97.10
Agricultural Prices		94.6	
United States	227.00	90.90	95.50
Nebraska	219.00	92.90	95.00

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture





If you think about the communication revolution and the existing strength of insurance in Nebraska, there is every reason we should be the national center for insurance claims processing and processing for other financially related services.

Economic Development Targets

This brings us to prospective economic development targets. They are telecommunications, insurance, high technology manufacturing (including pharmaceuticals, opto-electronics, engine technology, scientific instruments, etc.), biotechnology, and various service industries related to information. But any business willing to access national and international markets can be successful and create new jobs for Nebraskans. Look at what is happening in franchising. More than one-third of the retail sales of this nation are made through franchises. The fastest way to expand an existing business operation is through franchising. It is estimated that by the turn of the century more than 50 percent of the national retail sales will be through franchising. Nebraska can participate vigorously in this rapidly developing sector of the economy. This is one of the reasons we are excited about our newly established Center for Franchise Studies at UN-L.

Turning the Corner on Economic Development

Nebraska may have substantial difficulty directing emphasis to new economic opportunites because of the state's relatively large current investment in agriculture.

If we look at Nebraska compared to the United States, Nebraska's farm income still accounts for a good share of its income overall.

	Percentage of Income	
	Nebraska	National
Late 1960s Farm Income	15.4%	3.5%
1980s Farm Income	9.0%	1.5%

Unlike Nebraska, most states will not have substantial political opposition from agricultural interests when attempting to redirect investment to new economic sectors. These other states, therefore, may be able to change and adapt to new economic opportunities faster than Nebraska can. This brings us back to our two alternatives: a business (or state) in a rapidly changing environment can stop old investments and make new investments, or it can fail. It is critical that Nebraska make investments in new areas that can provide economic growth and new jobs.

What Place for the University and Research?

The University of Nebraska is a major state resource that has been relatively untapped for direct state economic development purposes, except for agriculture. Since the businesses of information discovery, scientific research, technological advances, transmission of information processing, and marketing of information will be the major job creators of the future, the areas of the country that have the greatest opportunity for flourishing are those with ties to major research institutions and universities.

Let me conclude by congratulating the citizens of Nebraska who are making an effort to develop a strategic plan for the state. It is exactly what the state needs to be doing. The people of Nebraska are a great and resourceful people. We have adapted successfully to many structural changes since the state was settled, and we also will adapt to the current changes—and prosper.

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No June Business in Nebraska

The budget squeeze at the University of Nebraska—Lincoln, the College of Business Administration, and the Bureau of Business Research will force us to omit the June 1987 issue of Business in Nebraska. Continued publication of Business in Nebraska is under review.

Several alternatives are under consideration, including less frequent publication, a different format, and modified printing and distribution methods. Reader ideas are important, and your suggestions and comments are invited.

For the time being, the Bureau of Business Research will maintain monthly retail sales data. This information will be available to interested persons on request. Stringent budgets are forcing the Bureau of Business Research to evaluate all of its activities, including publication of Business in Nebraska.

NEBRASKA FARM REAL ESTATE MARKET TRENDS

Bruce Johnson*

The value of Nebraska farmland continued to fall in 1986, but generally at a more moderate rate than that in previous years. Preliminary estimates from the UNL Department of Agricultural Economics annual survey show an average decline for the state of nearly 10 percent from February 1, 1986 to February 1, 1987 (see Table 1). Combined with earlier downturns, that places today's average value of Nebraska farmland at just 41 percent of its peak value in 1980-81. Few other states have encountered this magnitude of decline, although many have experienced a larger annual decrease over the past year.

Wide variations in value changes occurred during 1986. In the eastern third of the state, the all-land average decline ranged from 4 to 7 percent, while all-land averages fell 13 to 15 percent elsewhere (see Figure 1).

Clearly, dryland cropland values have exhibited the most stable performance during the past year, with a number of outstate reporters indicating areas of little or no decline and even some instances of modest increases since February 1986. For example, the northeast region exhibited the greatest stability, with reported average values for dryland cropland (no irrigation potential) and for center pivot irrigated cropland even slightly higher than those of a year ago.

For grazing land in the central and western areas of the state, the percentage declines for the 12 month period were sizable. Moreover, the value declines from peak-year levels for grazing land have been larger than those of any other type of land. Here too, however, reporters indicated some renewed activity in the past few months and possibly some degree of price stabilization since late 1986.

With 1986 being the sixth consecutive year of land value declines in the state, the overall adjustment has been substantial and not without economic pain. Today's values are roughly comparable to levels of thirteen years ago when the farm sector was just beginning to embark on a robust economic period (see Figure 2). In short, the devaluation of the 1980s virtually has wiped out the appreciation of the bullish 1970s. For the sector as a whole, Nebraska's farm real estate now is valued at about $14 billion, representing a value loss of more than $20 billion from its peak in 1981. This represents a considerable loss of wealth to rural Nebraska, impacting retirees and other rural residents as well as operating farmers. Both the private and the public sectors of rural communities will continue to bear the consequences of this loss for years to come.

In real terms (adjusted for inflation) farmland values in Nebraska are lower now than at any time since the mid-1940s. Even real values of the mid-1930s were higher than present levels. In other words, for the owner who has held a parcel of farm property for the past 40 years, there has been no change in the real wealth associated with that asset.

For the individual owner who bought farmland six to ten years ago, the loss of equity has been

**Bruce Johnson is affiliated with the UNL Department of Agricultural Economics.*

Type of Land & Year	Crop Reporting District								
	North-west	North	North-east	Central	East	South-west	South	South-east	*STATE*
	Dollars Per Acre								
Dryland Cropland (No Irrigation Potential)									
Feb. 1987 Value	242	190	520	246	626	288	377	416	371
Percent Change:									
from Feb. 1986	-6.60	-4.00	4.20	-6.50	-6.40	-6.50	-8.50	-1.60	-3.40
from peak year	-42.20	-45.10	-48.50	-56.20	-55.60	-47.30	-50.00	-60.80	-52.30
Dryland Cropland (Irrigation Potential)									
Feb. 1987 Value	285	250	567	325	707	328	503	508	484
Percent Change:									
from Feb. 1986	-8.60	-16.70	-5.20	-11.40	-5.20	-13.00	-12.20	-6.80	-7.60
from peak year	-58.10	-55.80	-49.90	-63.10	-60.40	-55.30	-64.90	-63.80	-59.40
Grazing Land (Tillable)									
Feb. 1987 Value	77	99	267	135	336	115	187	236	124
Percent Change:									
from Feb. 1986	-23.80	-26.70	-2.90	-18.70	-8.20	-21.20	-25.20	-2.10	-19.50
from peak year	-69.30	-62.10	-57.10	-69.00	-61.90	-65.40	-73.70	-63.90	-65.30
Grazing Land (Nontillable)									
Feb. 1987 Value	60	71	166	106	238	68	120	173	83
Percent Change:									
from Feb. 1986	-15.50	-16.50	-7.30	-19.10	-9.20	-19.00	-24.00	-2.80	-15.30
from peak year	-64.30	-61.20	-60.30	-68.70	-61.60	-68.70	-71.30	-63.50	-63.90
Hayland									
Feb. 1987 Value	160	119	188	195	271	148	175	201	144
Percent Change:									
from Feb. 1986	-15.80	-22.70	-19.30	-15.20	-19.10	-18.70	-7.90	-8.20	-19.60
from peak year	-51.20	-64.80	-66.30	-59.50	-63.30	-59.80	-60.70	-63.90	-61.60
Gravity Irrigated Cropland									
Feb. 1987 Value	650	567	775	802	959	718	863	843	826
Percent Change:									
from Feb. 1986	-13.80	-7.40	-13.90	-14.70	-1.60	-17.20	-10.40	-11.90	-10.20
from peak year	-58.90	-46.20	-56.50	-61.60	-60.10	-55.10	-61.70	-58.40	-59.30
Center Pivot Irrigated Cropland									
Feb. 1987 Value	417	396	703	541	888	487	665	723	580
Percent Change:									
from Feb. 1986	-15.90	-1.00	0.40	-13.80	-8.40	-12.70	-15.60	-8.20	-8.50
from peak year	-57.80	-55.30	-51.70	-58.80	-57.90	-56.60	-61.60	-61.90	-56.70
All Land Average									
Feb. 1987 Value	165	115	502	324	709	232	474	482	306
Percent Change:									
from Feb. 1986	-13.10	-15.40	-3.80	-14.50	-4.80	-15.00	-12.70	-6.90	-9.70
from peak year	-58.40	-57.60	-53.40	-62.50	-59.40	-56.80	-62.70	-61.70	-59.10

Table 1.
Average Reported Value of Nebraska Farmland For Different Types of Land by Crop Reporting District
February 1, 1986 and February 1, 1987

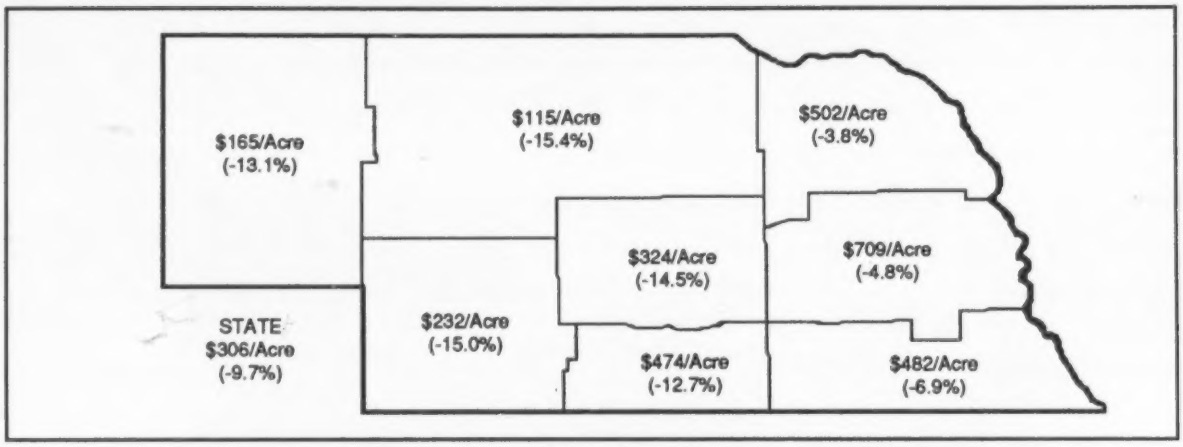

Figure 1.
Average Value of Nebraska Farmland, February 1, 1987 and Percent Change From One Year Ago

severe, particularly if acquisition involved debt financing. For many in this position, the financial stress has been and continues to be acute. For some, it has led to termination of their farming operations.

For others, who perhaps by good fortune as much as by good planning did not acquire farmland prior to its recent value decline, today's values may be perceived quite differently. For them, it may be considered an opportunistic time to acquire land for a fraction of the bid prices of just a few years ago. Reporters from around the state indicate interest on the buyer side of the market is picking up and, in turn, undoubtedly is contributing to stabilization of values in recent months.

There are other factors that also appear to be stabilizing farmland values. Farm income levels have improved over the past two years as favorable weather patterns have prevailed throughout most of the state. At the same time, some modest declines in production input costs occurred, while government farm programs have buoyed crop revenues. Livestock producers also have welcomed back profits to their operations in recent months. The culmination of these income factors definitely has slowed the downward spiral in agricultural land values and rekindled buyer interest.

Changes in the financial markets also have been influential in the market for farmland. Lower mortgage interest rates recently have bolstered real estate market activity to some degree. This may not be the critical factor that it was in the early 1980s, however, when nearly nine out of every ten farmland transactions involved debt financing. Today, a significant portion of farmland acquisitions (more than one third and perhaps nearly one half) are cash sales involving no indebtedness. Moreover, those purchases that do carry some debt usually involve sizable down payment amounts. In short, the market has shifted dramatically from debt capital to equity capital (See Figure 3). Buyers in the marketplace today are generally not heavily credit dependent, but rather are able to assemble sizable equity amounts either from cash reserves or from conversion of other capital.

Perhaps a greater influence of financial markets on farmland has been alternative investment opportunity. Lower rates of return to bonds and other financial securities have prompted investors to consider alternative investments—including farmland. The rate of economic return to certain types of farmland now appears favorable to some of these options, unlike the situation of a few years ago when a government bond could yield the investor 15 percent annually while farmland would yield 3 percent. Given today's land value levels, the annual rate of return to cropland in some parts of the state will exceed 8 percent of asset value and be competitive with other investment opportunities.

WHAT MAY LIE AHEAD?

Although some recent signs of greater market strength exist, questions still remain. Have we witnessed the market trough? Are stable values likely for the foreseeable future? Could we see market values rebound? Questions such as these are difficult to address because the market itself is complex. Future trends in farmland values will be influenced by a host of factors that can be classified in institutional, biological, and economic sets. We

Continued on page 6

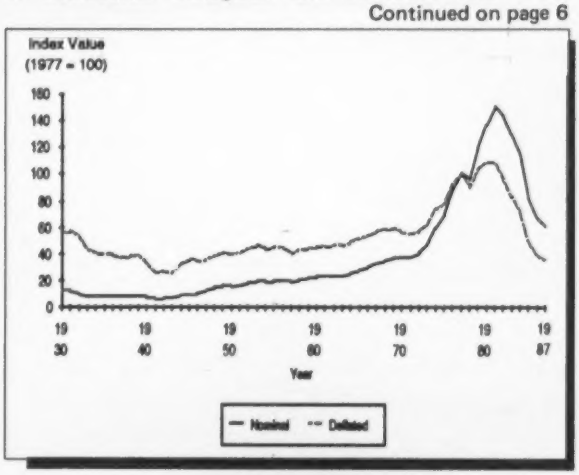

Figure 2.
Index of Farmland Values, 1930—87
Nebraska, Nominal & Deflated

ECONOMIC DEVELOPMENT MYTHS

Lower taxes frequently are touted as a means to promote economic growth. It has been suggested that Nebraska's growth rate would be stimulated if tax rates for individuals and corporations were lowered. Nationally, an experiment in the 1960s indicated that tax cuts could increase U.S. output. It, however, is not clear that cuts at the state level will stimulate growth.

Florida, Tennessee, and Texas have fared well without state individual income taxes and with limited or no corporate income taxes. At the other extreme, however, are states such as Connecticut and Minnesota with high rates of taxation that have enjoyed spectacular growth of employment and income.

Minnesota led all states in the north central region of the U.S. from 1982 to 1986 in employment and income growth, and it has one of the highest tax structures. A person earning $50,000 in Minnesota would pay an estimated $3,589 in Minnesota state income taxes, compared to $2,315 in Iowa or $1,300 in Nebraska (Table 4). Connecticut also has experienced rapid growth, as have Florida and Tennessee (Table 4). Texas gained substantially until oil prices collapsed in late 1985.

Lowering taxes in Nebraska may stimulate economic growth, but it may not. Other factors, such as the rate of growth of the national economy, fluctuations in the value of the dollar, variations in interest rates, or changes in commodity prices, may override any adjustments in Nebraska's tax rates.

As Nebraska shapes an economic development strategy, it is important to remember there is no single magical solution to Nebraska's development and growth problems. There is no substitute for old-fashioned work in promoting and diversifying the state by developing and encouraging its small businesses, creating educational opportunities for Nebraska citizens, and maintaining and expanding the state's infrastructure (including roads, water, safety, and health delivery systems). Much of this work is dull and unspectacular. Taxes may need to be raised for education or infrastructure. It is unlikely that economic development will occur, however, without a commitment to a first-rate education system and a well-maintained state infrastructure.

Donald E. Pursell

Table 4
1984 Individual State Income Tax Liabilities For Selected Gross Incomes

	Married-One Wage Earner Taxable Income			Number Employed November, 1981 *(thousands)*	Number Employed November, 1986 *(thousands)*	Percent Change
GROSS INCOME	25,000	50,000	100,000			1981-1986
STATE:						
CONNECTICUT	0	0	0	1,505	1,723	14.40
FLORIDA	0	0	0	3,850	5,375	39.60
IOWA	900	2,315	5,248	1,337	1,360	1.70
KANSAS	407	1,359	4,317	1,161	1,173	1.00
MINNESOTA	1,399	3,589	7,610	2,047	2,140	4.50
MISSOURI	540	1,390	2,898	2,128	2,391	12.40
NEBRASKA	405	1,300	4,031	756	773	2.20
NORTH DAKOTA	224	719	2,228	290	298	2.80
SOUTH DAKOTA	0	0	0	321	329	2.50
TENNESSEE	0	0	0	1,883	2,156	14.40
TEXAS	0	0	0	6,394	7,489	17.10

Source: Comparison of the 1984 Individual Income Tax Burdens by State. Minnesota Taxpayers Association, 1984.

Notes: Connecticut and Tennessee taxed capital gains, dividends, and interest only. Florida, South Dakota, and Texas had no income tax. Employment numbers were taken from Employment and Earnings, a U.S. Department of Labor, Bureau of Labor Statistics publication. Data are from the January 1987 edition, Table D-1, pp 150-154 and from the February 1982 edition, Table E1, pp. 124-128.

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REVIEW AND OUTLOOK

The national economy is building momentum. Preliminary estimates of first quarter 1987 gross national product show real growth of 4.3 percent, the best performance in several quarters. Employment is 2.5 million above year ago levels, with gains concentrated in the service sector. Service sector jobs range from minimum wage jobs in retailing to well paid positions in computer servicing, repair, data processing, advertising, financial services, and health care. According to the Bureau of Labor Statistics, there have been more well paying service jobs created during the past two years than low paying service jobs.

Nebraska's economy is slightly above year ago levels and is expected to improve 1.5 to 2.0 percent during the coming twelve months. Nationally, real growth of around 3.0 to 4.0 percent is expected. Employment in Nebraska is 8,000 above year ago levels and will continue to show modest increases during the next year. Omaha employment was 292,000, compared with 289,000 a year ago. Lincoln employment was 108,000, up from 107,000 last year.

Low grain prices make it difficult for grain producers to make adequate returns, but livestock producers, particularly hog producers, are doing better. The agriculture economy will provide little boost to the state economy in the coming year.

Fourth quarter Nebraska personal income stood at $21.7 billion, up $400 million from the fourth quarter of 1985. Fourth quarter results were not impressive, which can be explained in part by a surge in personal income during the fourth quarter of 1985.

For all of 1986, Nebraska personal income was up 3.1 percent. When adjusted for price changes of 1.6 percent, real personal income rose nearly 1.5 percent. Components showing respectable gains include earnings from services, dividends, interest, rent, Social Security payments, and proprietors income. These trends will continue in 1987.

Donald E. Pursell

ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

January 1986	Current Month as Percent of Same Month Previous Year		1987 to Date as Percent of 1986 to Date	
Indicator	Nebraska	U.S	Nebraska	U.S.
Dollar Volume	100.30	103.00	100.30	103.00
Agricultural	89.10	90.20	89.10	90.20
Nonagricultural	102.40	103.30	102.40	103.30
Construction	95.30	101.40	95.30	101.40
Manufacturing	93.20	97.60	93.20	97.60
Distributive	104.60	104.60	104.60	104.60
Government	103.60	106.60	103.60	106.60
Physical Volume	99.50	101.60	99.50	101.60
Agricultural	96.60	92.60	96.60	92.60
Nonagricultural	100.20	101.90	100.20	101.90
Construction	93.80	99.70	93.80	99.70
Manufacturing	95.10	99.40	95.10	99.40
Distributive	103.10	103.10	103.10	103.10
Government	98.60	101.60	98.60	101.60

2. CHANGE FROM 1967

Indicator	Percentage of 1967 Average Nebraska	U.S.
Dollar Volume	377.40	479.50
Agricultural	388.80	292.80
Nonagricultural	375.40	485.50
Construction	233.80	504.00
Manufacturing	343.10	311.60
Distributive	394.60	576.40
Government	412.80	503.40
Physical Volume	131.10	154.10
Agricultural	180.90	131.30
Nonagricultural	123.40	154.90
Construction	63.70	137.30
Manufacturing	140.00	124.20
Distributive	118.50	173.00
Government	152.40	157.30

3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

Region Number and City	City Sales** January 1987 as percent of January 1986	Sales in Region** January 1987 as percent of January 1986	Sales in Region** 1987 to Date as percent of 1986 to Date
The State	102.20	98.90	98.90
1 Omaha	97.60	95.20	95.20
Bellevue	108.80		
Blair	101.10		
2 Lincoln	105.20	99.80	99.80
3 South Sioux City	89.20	94.40	94.40
4 Nebraska City	97.40	105.40	105.40
6 Fremont	92.60	93.60	93.60
West Point	85.60		
7 Falls City	106.70	104.50	104.50
8 Seward	105.70	97.00	97.00
9 York	107.60	101.90	101.90
10 Columbus	105.20	101.40	101.40
11 Norfolk	109.00	102.80	102.80
Wayne	101.60		
12 Grand Island	100.30	97.30	97.30
13 Hastings	101.40	99.70	99.70
14 Beatrice	96.60	101.50	101.50
Fairbury	112.70		
15 Kearney	114.90	110.30	110.30
16 Lexington	94.50	104.10	104.10
17 Holdrege	92.90	96.80	96.80
18 North Platte	98.60	93.50	93.50
19 Ogallala	159.50	121.00	121.00
20 McCook	103.90	97.90	97.90
21 Sidney	93.00	83.40	83.40
Kimball	72.30		
22 Scottsbluff/Gering	116.30	111.70	111.70
23 Alliance	89.60	98.10	98.10
Chadron	117.10		
24 O'Neill	109.60	100.70	100.70
25 Hartington	105.80	111.80	111.80
26 Broken Bow	92.80	97.90	97.90

** Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue

NOTE: Employment data from the Department of Labor were not available this month.

Continued from page 3

briefly will discuss each.

Several institutional elements carry implications for the farmland market. Agricultural credit institutions, as they determine the cost and availability of credit, will impact buyer participation to varying degrees. Until rates of return to farmland exceed the interest rates on debt, the caution associated with debt financing likely will continue. Likewise, the recently enacted federal tax reform system removes some of the traditional tax incentives associated with real estate investment. Also, institutional measures that restrict ownership can create a dampening effect on the buyer side of the agricultural land market; here in Nebraska, statutes prohibiting foreign (alien) ownership of farmland as well as the constitutional restriction on nonfamily corporations and limited partnerships now preclude certain buyer entities that otherwise may be present.

Undoubtedly the most prominent institutional factor impacting farmland value trends is the future of federal farm programs. Nebraska's farming sector is particularly dependent upon these programs, with government price support payments often representing the difference between profit and loss. Any significant reduction in these government transfers further would reduce cropland values. To some extent, the possibility of such reductions already is being factored into today's market in the form of bid levels being discounted for uncertainty.

Biological factors impact the agricultural land market because demand for such land is derived demand based upon what the land produces. For example, one must be cognizant of the recent advances in world food production, with numerous countries expanding food output and becoming self sufficient. In essence, this represents other land areas of the world substituting for U.S. farmland, thereby dampening its potential earnings and value. Likewise, a similar outcome arises from the advent of biotechnology and genetic engineering, which may expand agricultural productivity greatly. In this instance, another input (technology) is substituted for farmland. Conversely, the future may include major environmental problems associated with nonland inputs (such as commercial fertilizers and chemicals) leading to a greater dependence on farmland.

Finally, many economic factors will affect the future direction of farmland values. The nature of the U.S. economy itself will be important. For example, should this country experience accelerated rates of inflation, investor interest in farmland also may increase, reflecting the belief that it represents a good store-of-value and hedge against inflation during such economic times.

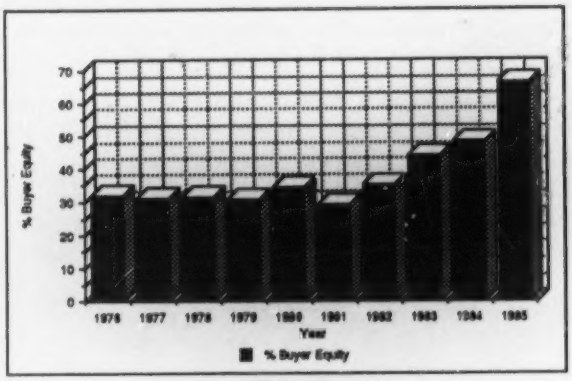

Figure 3
Buyer Equity in Land Transactions
Nebraska Farmland Sales
1976-85

Dramatic changes in the structure of the agricultural economy, which are already underway, also carry important connotations for the farmland market. Innovative farm management strategies for the 1990s may dictate greater emphasis on leased capital and less on debt capital. In turn, the presence of the farmer buyer gradually may decline.

Another economic variable is the fickle consumer and his or her changing tastes and preferences regarding food and nutrition. As diet patterns change, significant production shifts both within and among regions of the country are likely in the future, with farmland values adjusting accordingly.

In summary, the number of possible scenarios regarding future farmland value trends is limitless. Although some price stability is appearing on the short-term horizon, major unsettling forces still prevail on all three fronts—the institutional, the biological, and the economic. We remain in a period of rapid change and uncertainty. Only time will tell the outcome.

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